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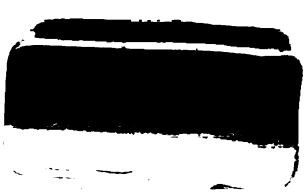

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PREFACE.

CONSIDERING the Number of Books on the Theory and Practice of Architecture already publiſhed, any further Effort to illuſtrate and familiarize this MOST NOBLE ART, may ſeem ſuperfluous and unneceſſary; in me eſpecially, who, by former Publications, have endeavoured to advance the young Practitioner in the Knowledge of his Profeſſion.

11-29-35 V.A

But as Art is improving, greater Experience enables to diſcern the truly uſeful, and thereby to confirm or reject former Methods.

The very great Revolution (as I may ſay) which of late has ſo generally prevailed in the Style of Architecture, eſpecially in the decorative and ornamental Departments, will evince the Neceſſity and eminent Utility of this Publication. That Taſte (ſo admirable in our modern Buildings) which is vainly ſought for in any other practical Treatiſe, the Workman will here find illuſtrated in a great Variety of uſeful and elegant Examples.

The Deficiencies and confined Plans of thoſe Books now uſed by Workmen, is another Inducement to collect together in one View, the moſt eaſy and certain Rules to carry on the Building Art. Theſe now offered are the Reſult of Experience, and have long been uſed by the Author in conducting Buſineſs, who now offers them to the Public as a general practical Treatiſe, wherein his great Care has been, plainly and faithfully to anſwer the Purpoſe of the manual Artificer: It is not meant to inſtruct the profeſſed Artiſt, but to furniſh the Ignorant, and ſupply the Uninſtructed, with ſuch a comprehenſive Syſtem of Practice, as may lay a ſolid Foundation for their Improvement, and thereby enable them to execute with Eaſe and Preciſion the various Branches of the Profeſſion.

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A *TABLE* for the Cutting of Timber for Building.

Bearing Poſt.

Height	9 Inch. ſquare.
If 8 Feet	
— 10 —	10 by 9
— 12 —	11 — 12
— 16 —	14 — 15
— 20 —	16 — 18

Girder's Bearing.

If 10 Feet	10 by 9 In
— 12 —	11 — 10
— 14 —	12 — 11
— 16 —	12 — 13
— 18 —	13 — 14
— 20 —	15 — 14
— 24 —	15 — 16
— 30 —	16 — 18

Binding Joiſts.

Bearing	Inches
6 Feet	6 by 4
8 —	7 — 4
9 —	8 — 4
12 —	10 — 5

Bridging Joiſts.

Whoſe Bearing ſhould not exceed 5 Feet, and Scantling not leſs than 6 by 4.

Common Joiſt.

Bearing	Inches
6 Feet	6 by 3
9 —	9 — 3
12 —	12 — 4

Beams or Ties.

Length	Inches
12 Feet	7 by 8
16 —	8 — 9
20 —	9 — 10
30 —	10 — 11
40 —	12 — 11
50 —	13 — 12

Small Rafters.

Bearing	Inches
8 Feet	5 by 3
10 —	7 — 3
12 —	8 — 4

Principal Rafters.

Length	Bot^{m}.	Top.	Thick
From 12 to 16 Feet	8	6	5
From 16 to 20 —	9	7	6
From 23 to 24 —	10	8	7
From 24 to 30 —	12	10	9

Purlins from 8 by 5 to 9 by 7 or 10 by 8.

Raiſing Plates from 7 by 5 to 8 by 6, or 10 by 8.

Ground-ſills the ſame as raiſing Plates.

To Face PLATE I.

Figure *A* and *B* are ribb'd NICHES for Plaiſtering.

THE Plan *a* is a Semi-Ellipſis on the Tranſverſe Diameter, which is drawn with a Tramel as repreſented in the Plan, which is to be made with a Groove at Right Angles as in the Figure; two Pieces to be mortiſed to ſlip on the Rod, and one fixed at the End for a Pencil, &c. fix one of the Pieces equal to half the Conjugate Diameter, and the other to half the Tranſverſe Diameter, and moving the Rod with the Pins in the Grooves, the Pencil will deſcribe the Semi-Ellipſis.

To draw the Ellipſis *c* to any given Length and Breadth, take half the Conjugate Diameter *a b* and ſet it on the Tranſverſe Diameter *d c*, divide *c a* into three equal Parts, and make *c e* equal to one of thoſe Parts, and with the Radius *e f* biſect *g g*. So the Points *e f* and *g g* are the Centres for drawing the Ellipſis to any Length and Breadth.

To draw the Ellipſis *d* with a Line, take half the Tranſverſe Diameter *b a*, and ſet it from *c* on the Conjugate Diameter to *d* on the Tranſverſe Diameter, and to *e* on Ditto; then *e d* are the Points to be fixed for the Line to go round, which will deſcribe the Ellipſis with the Point *f*.

To glue the Head of a Nich as Figure *e*, cut the Arch Part of the Board or Stave to the Thickneſs of a Veneer, and bend it on a Templet, and back it to the Curve; it may be jointed the ſame as a Column, &c.

To deſcribe a Polygon to a given Side from five to eight Sides, make a Radius of the given Side for the Pentagon, divide the Arch into five Parts, turn one down on the Line which is the Centre, to deſcribe a Circle which will contain the Side five Times.

For a Hexagon, the Radius of the Side is the Centre.

The Heptagon into ſeven Parts and turn one up.

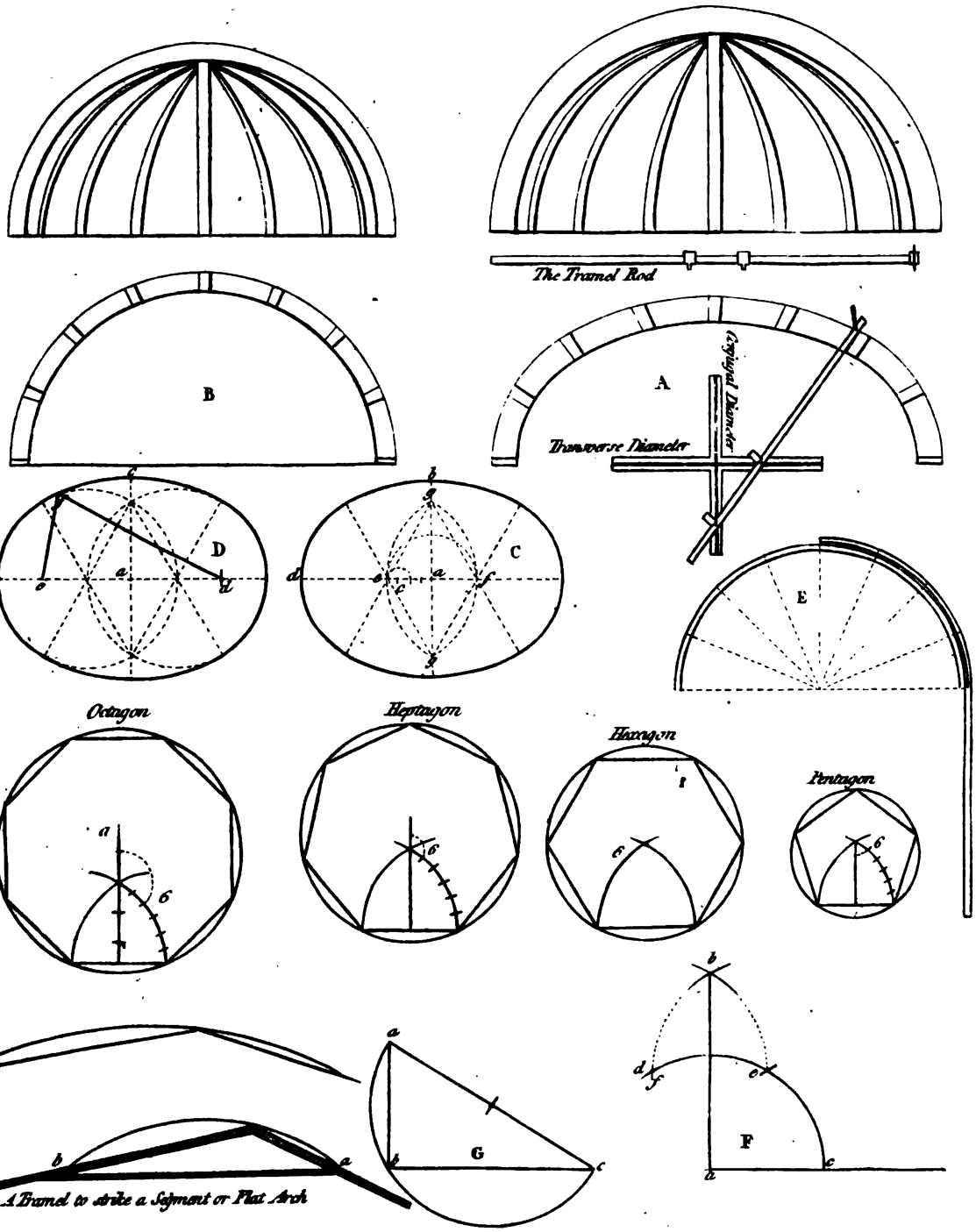
The Octagon into four and turn one up.

To raiſe a Perpendicular at the End or Middle of a Line. Deſcribe the Arch *c d*, and with the Radius *a c* make *e f*, which biſected at *b*, gives the Perpendicular to *a*.

To let fall a Perpendicular from a given Point to a Baſe Line. Figure G; let *a* be the Point given to fall to the Baſe Line *b c*, draw a right Line from *a* at Pleaſure to meet the Baſe Line as at *c*, more or leſs; divide the Line *c a* into two Parts, and draw the Semi-Circle *a b c*, and where the Circle cuts the Baſe Line at *b*, which will be at Right Angles with *a*, and is the Point required.

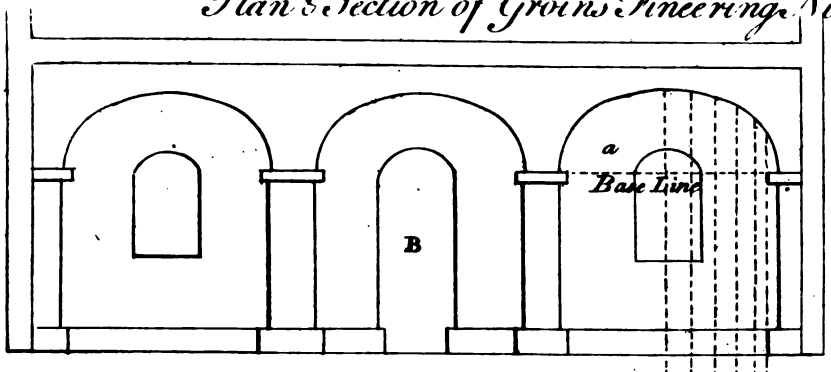
Niches, Polygons, Tramels &c.

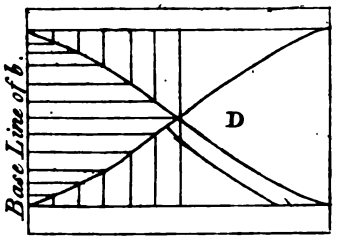
Plate I.



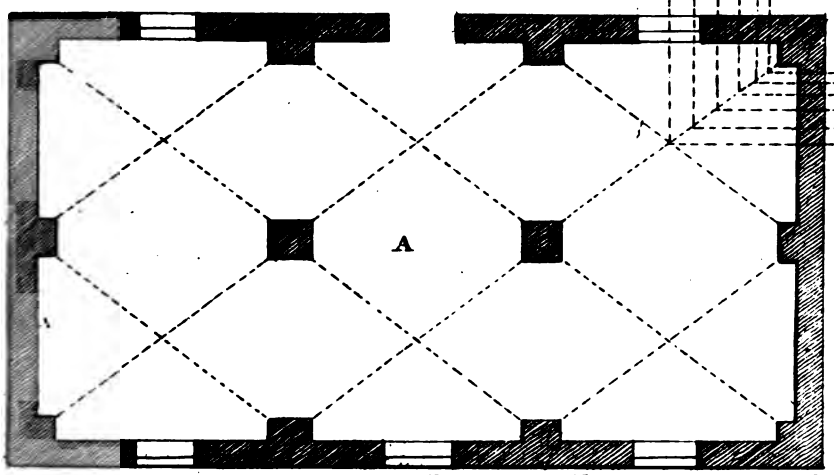
Plan & Section of Groins Fineering Niches &c.

Plate II.





The Arch line of a, Stretched out at lenght.



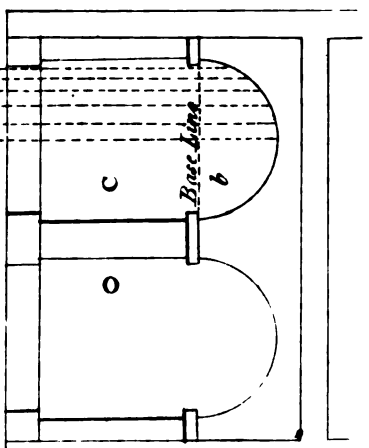
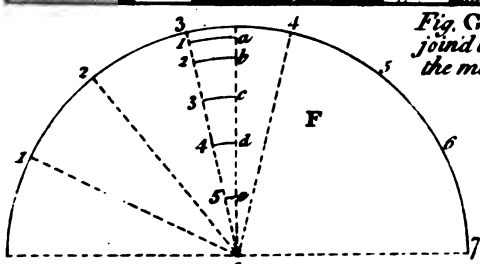
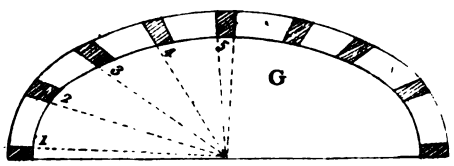
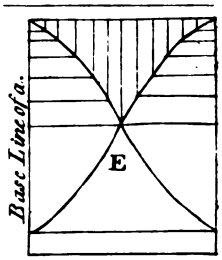


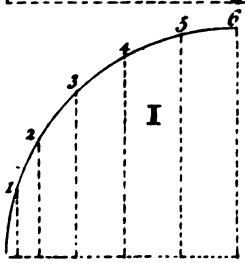
Fig. C, is a Ribb'd Nich for plaistering with the Ribs all joind to y^e^ place where to stand the Edges are Bevel so the mould must be shifted.







The arch line of b. Stretched out at lenght.



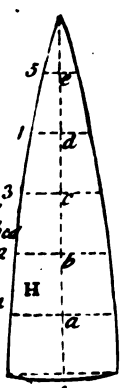


Fig. F, is a plan of Nich to be fineered H, is the finner stretched out at lenght from y^e^ Arch I. & 2 F, is y^e^ plan which y^e^ edges are traced from, which is plain to Inspect but the more parts it is divided into the truer the Round, the plan is in 7 parts but in practice it may be into 15 parts or more at pleasure.

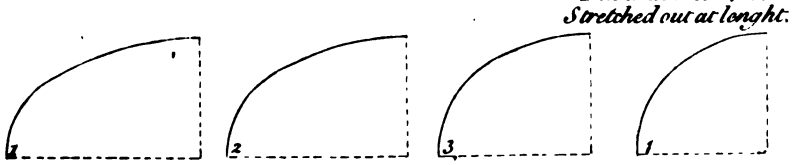


Fig. A, is a Plan of a Cellar Ground in B & C are the Sections which shew how the hip is traced to make the Angle streight over y^e^ plan D and E, are the covering or face of the Groins stretched out from which a mould may be made to make the hip or Angle streight if the Ribs C, O, are set first & boarded in the mould must be taken from E, but if the Arches in Section B, be set first the mould must be taken from D.

Fig. B. *is an Arch standing on Flewing Jambs in a Straight Wall and supposed to be a fair Arch in Stone or Brick. Divide the Round of the Arch in as many Parts as are Courses to Compleat the Arch and drop them to the Wall Line, then Draw them cross the Wall, Parallel with the Jambs, and that shews how much is to be Cutt of the Face of each Course.*

Circular Arches &c. in a Circular Wall.

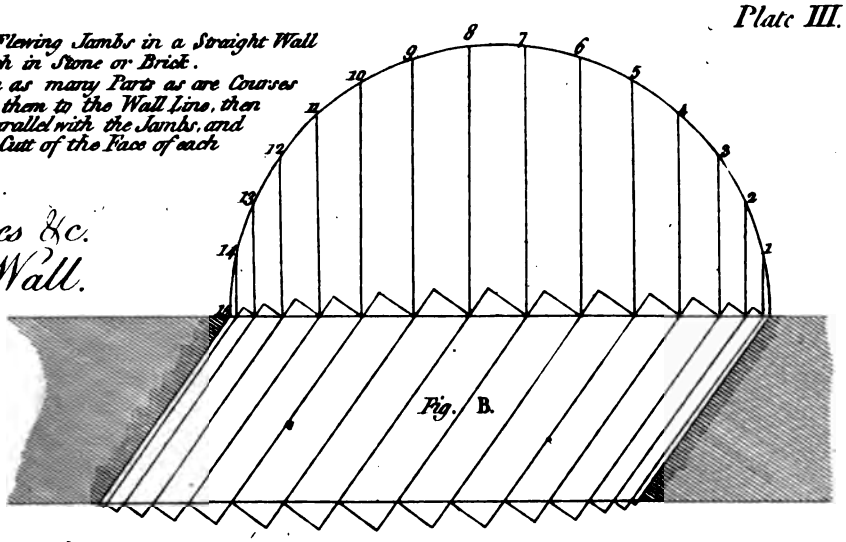
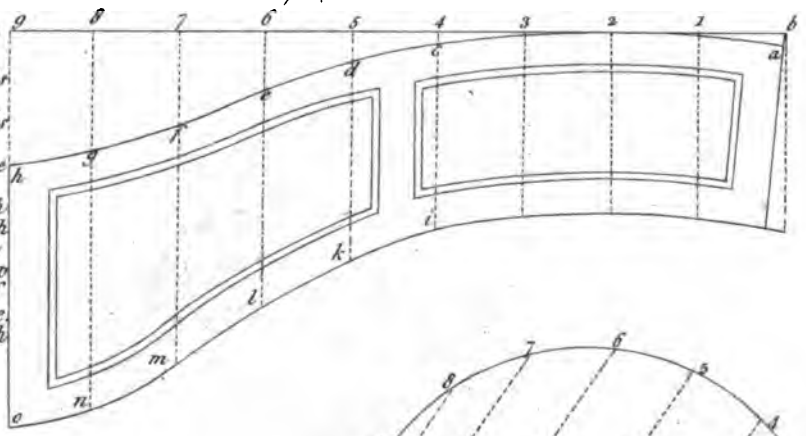
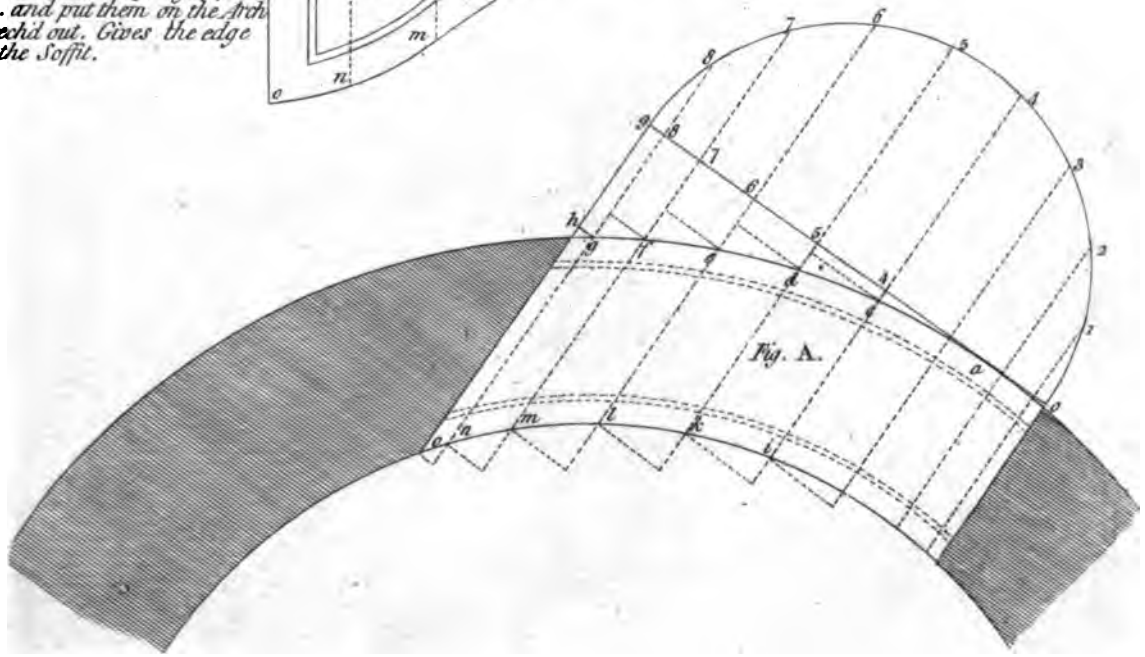


Fig. A. *is a Circular Wall which has a Door or Window that stands Flewing. Because the Jambs do not stand at Right Angles with the Diameter of the Circle, as in Plate IV find the Curve Line of the Soffit, in this Case draw the Cord Line or Base Line of the Arch, o, g at Right Angles with the Jambs o. h to touch the Arch of the Wall at a, and Divide the Arch into equal Parts and drop them to the Wall then take of the Distances. h. g. 8. g. 7. f. 6. e. &c. and put them on the Arch stretch'd out. Gives the edge of the Soffit.*





To Face PLATE IV.

Figure *A* is a PLAN to be GROIN'D.

DIVIDE the Baſe Line *a* of the given Rib into equal Parts, and that of *d* into the ſame Number of Parts, and draw Lines to the Arch Line of *a*, and likewiſe in *d* at Pleaſure; then take 1, 2, 3, 4, 5, 6, &c. from *a*, and tranſfer them to *d*, as 1, 2, 3, 4, 5, 6, &c. and through the Point 1, 2, 4, 6, 8; trace the Arch Line over *d*, and ſo for the Reſt, as is plain to Inſpection. The Angle Bracket is done in the ſame Manner.

To deſcribe a circular Soffit in a circular Wall, as in B.

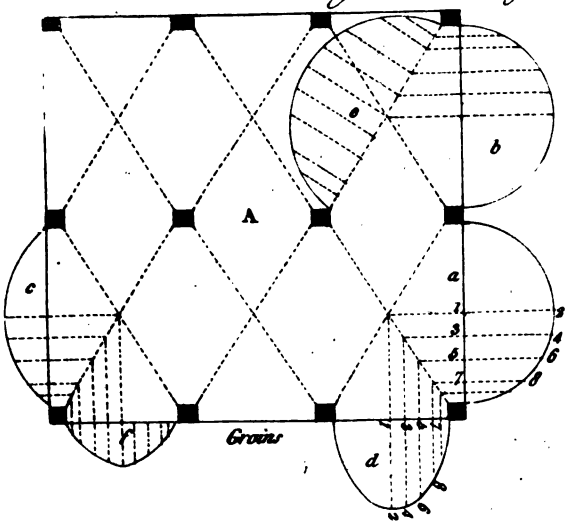
Draw the Cord Line of the Arch, or Baſe Line ſo called, to touch the Arch of the Wall; then draw the Semi-Circle and divide the Round of it in a Number of equal Parts, as here into 9, but the more Parts the truer the Work, and draw them to the Arch of the Wall; then ſtretch out the Arch Line at Length as in *e*, and transfer the Parts that are between the Wall and Baſe Line, as 1, 2, 3, 4, 5, 6, &c. to *e*, which gives the Edge of the Soffit or Pannel.

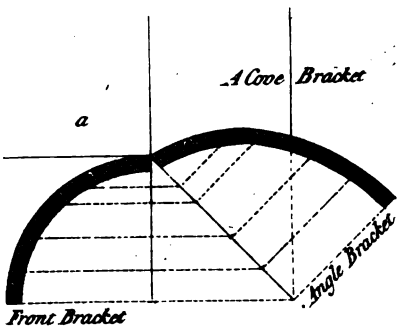
To deſcribe a circular Soffit in a ſtrait Wall on flewing Jambs.

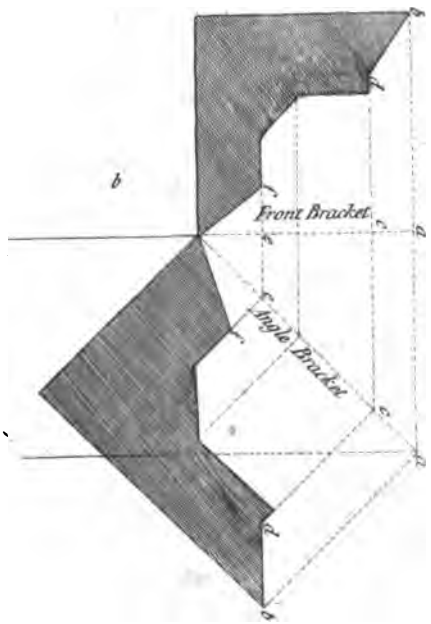
Continue the flewing of the Wall till it meets at *b*, then ſet the Compaſſes at *b*, and draw two Arches to the Thickneſs of the Wall; then put on the Girt of the Soffit *c d*, which gives the Length of the Soffit and Edge of ditto.

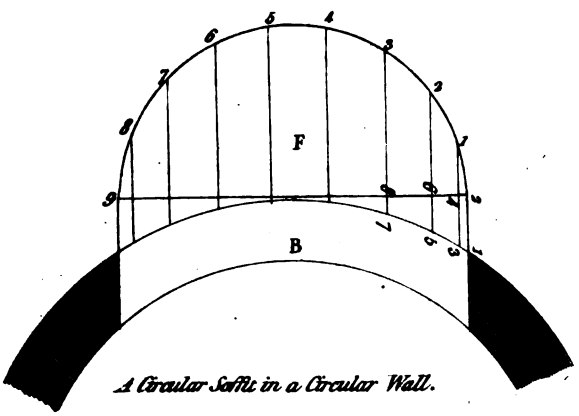
Groins, Angle Brackets &c.

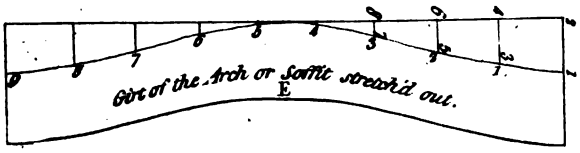
Plate IV.

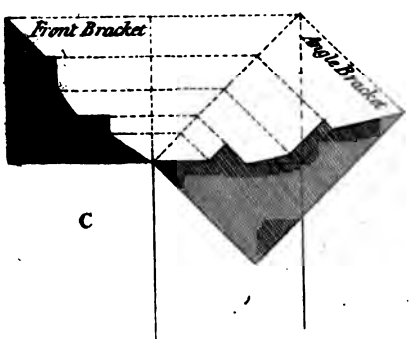


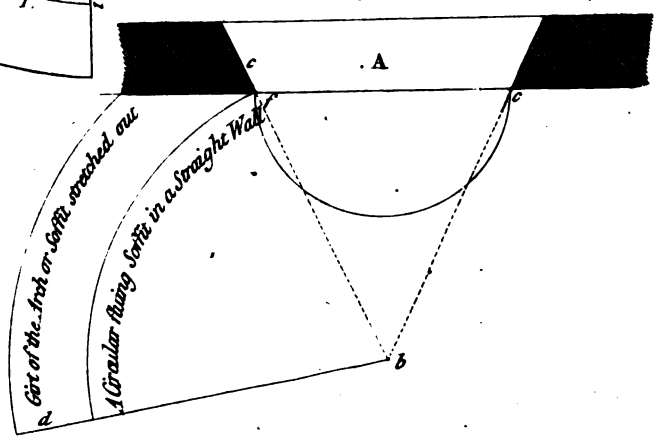




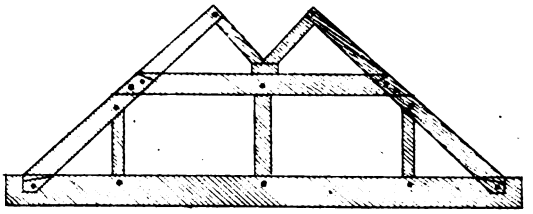




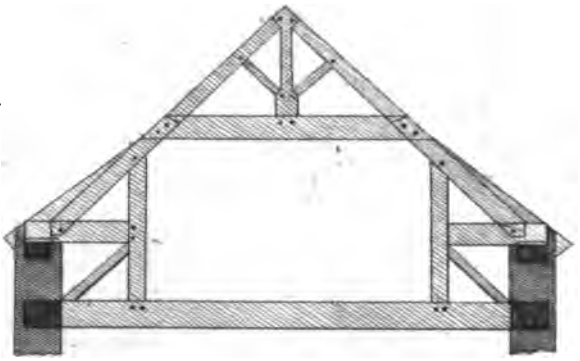




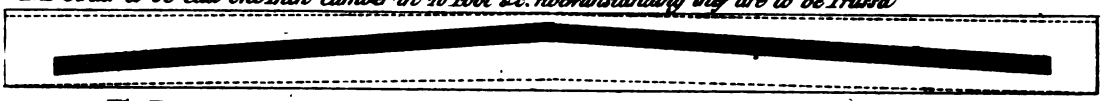
Trussing Girders Floors &c.



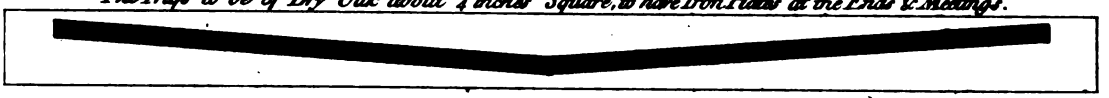
The Dovetail to have one Inch and Quarter Draft on each Side the Beam.

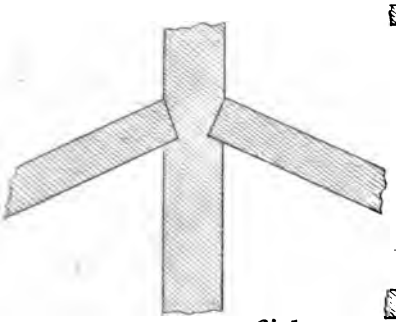


The Girder to be Cutt one Inch Camber in 20 Foot &c. notwithstanding they are to be Trussd

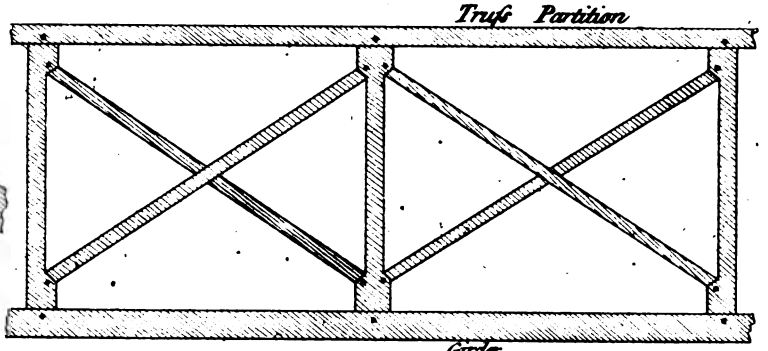


The Truss to be of Dry Oak about 4 inches Square, to have Iron Plates at the Ends & Meetings.





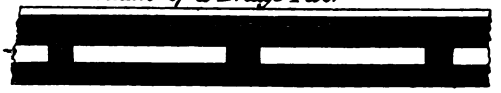
Truss Partition



Girder

Binding Joist

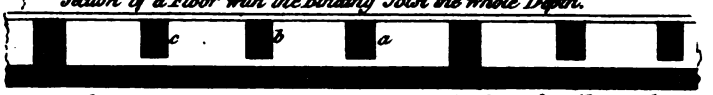
Section of a Bridge Floor



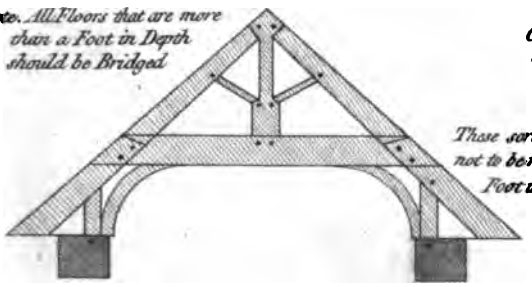
Girder

Binding Joist

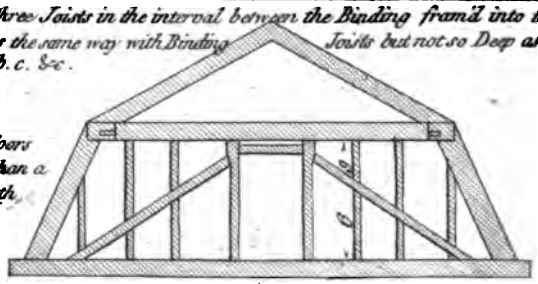
Section of a Floor with the Binding Joist the whole Depth.



Note. All Floors that are more than a Foot in Depth should be Bridged with three Joists in the interval between the Binding framed into the Girders the same way with Binding Joists but not so Deep as ditto as a.b.c. &c.



These sort of Floors not to be more than a Foot in Depth.



Curb Roof.

To Face PLATE VI.

Figure *A*, Plan and Ledgment of the Roof, ſhewing how to find the Length and Backing of Hips, Valley, &c.

TO find the Length, take the Baſe Line of the Hips *a b*, *b c*, and *b e*, and ſet them on the Baſe Line of the principal Rafters, as *b a*, *b c*, *b e*, and draw Lines from the Top of the Rafter to *a c e*, which is the Length of each Hip. Or the Length may be found by ſetting up the Perpendicular from the Baſe Line of the Hips, as *b g*, and draw the Line *g a*, is the Length of the Hip. To back the Hip, lay down the Thickneſs of the Hip at the Angle of the Plan, as *H*, and draw Lines to range the Plates, will ſhew how much Wood is to come off in the Backing; that is, the Mould muſt be a Piece of Wood as thick as the intended Hip, and cut it to the Splay or Pitch of the Hip at the Foot, ſetting it on the Angle of the Plate in the Direction of the Hip, mark it under by the Side of the Plate; gives the true Backing in any Caſe required. A very ſure and ſafe Way for the Backing.

Figure B is the Plan of an M Roof, with Hip and Valley in Ledgment, &c.

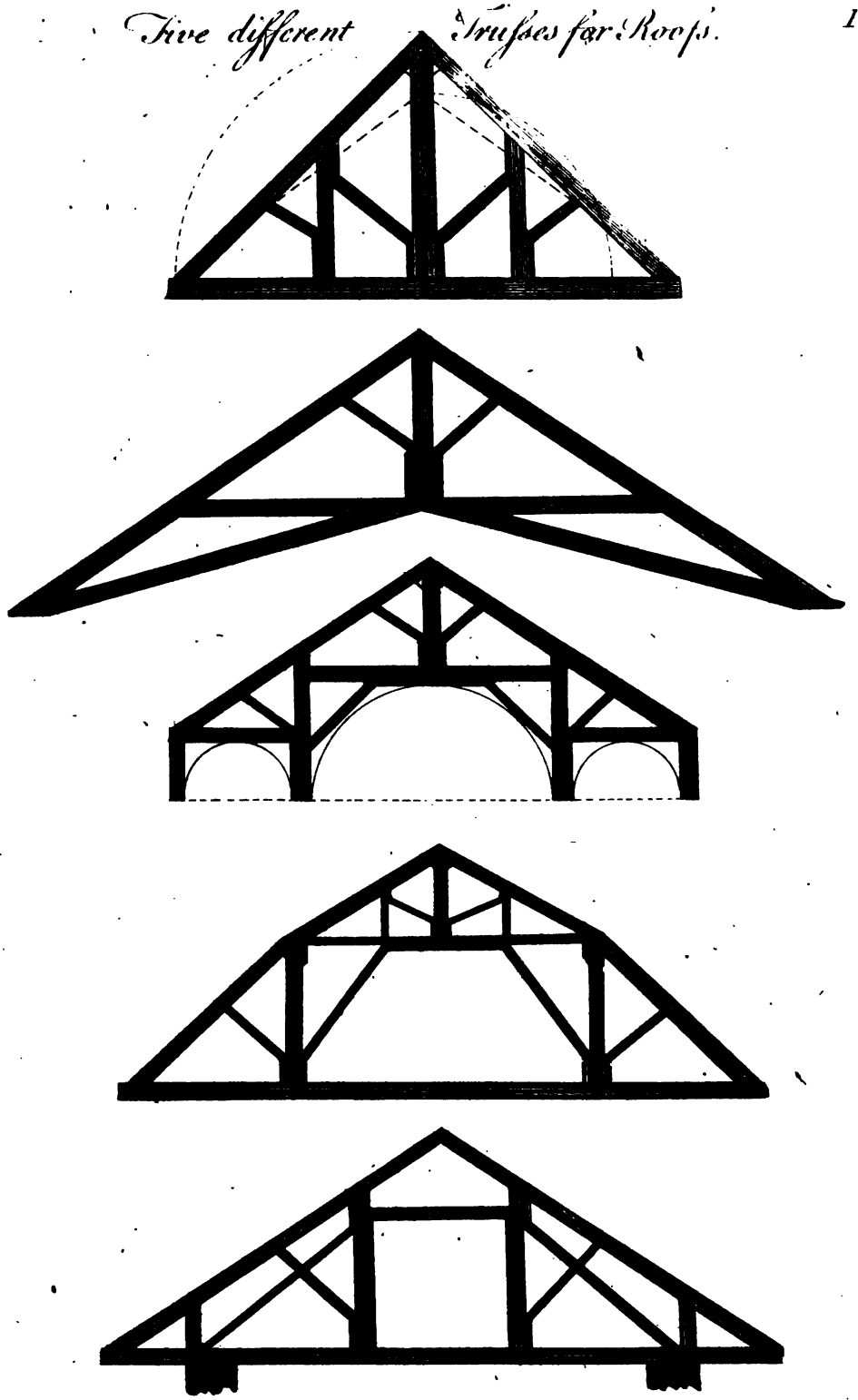
Note, The Back of the Hip is found another Way, as in the Plan *A*, by drawing a Line at Right Angles, croſs the Baſe of the Hip, as *r d g*, or on any Part of the Baſe Line, and ſet one Foot of the Compaſs at *d*, and extend to the neareſt Part of the Hip *g a*, and turn it on the Baſe Line as at *r*, then draw the Lines from the Point *r* to *g r*, on the Edge of the Plate, which is the Backing of the Hip required. This will do in any Caſe, ſquare or bevel.

Plan of Ledgment of Roofs.

Plate VI.

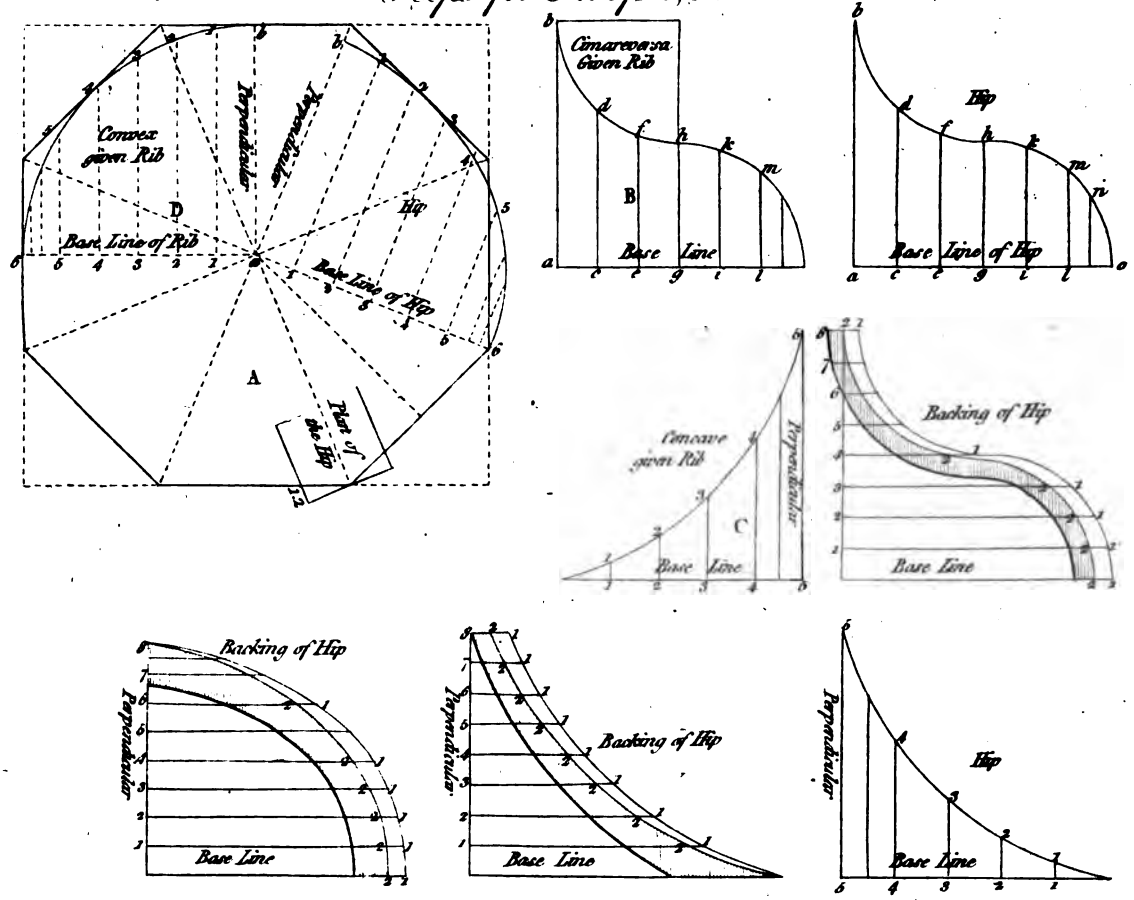
Mould for Backing the Hip or Plan of the Hip
H
Fig. A.
Two Roofs in Ledgment shewing how to find the Length and Backing of Hips
Sawing of Plates
Fig. B.
Hip
Valley
Square or Bevel in any Cove required
A Truss for a large Span
Truss for a
Sawing of Beams
A Truss for a Dome or Center

Five different Trusses for Roofs.



Hips for Roofs &c.

Plate VIII.



The manner of finding the Length and Backing of Curve Line Hips in any Case required. Suppose the Octagon. Plan A. to be Roofd with the Cimarecerversa B. or the Concave C. or the Convex D. in the Plan. Divide the Base Line of the given Rib into any number of equal Parts and draw Lines from those parts on the Base Line to the Back of the Rafter: a b. c d. e f. g h. i k. l m. and all the others as 11, 2 2, 3 3. and so on. Then the Base Line of the Hips must be divided into the same number of Parts and Lines drawn up at Pleasure as a b. c d. &c. from the Base Line of the Hips, then take the several Heights of the given Ribs and set them on the Hip Lines, then draw them through those Points b d. f h. k m. n o. that will give the Curve or Edge of the Hip and the same for all the others and for the Backing of the said Hips. there is a Plan of the Hip at the Angle of the Plan A. which shews how much Wood is to be Cutt off each side of the Hip. Divide the Perpendicular Height of the Hips into any number of equal Parts. and draw Lines Parallel with the Base Lines of the Hip. Then take the Distance from the Plan of the Hip to the Side of the Plan A. as 1 2 and put them on the Hips. as 1 2. 1 2. &c. which gives the true Backing in any Case required. Note when the parts are Set on at Bottom and Top of the Hip the Mould may be shifted and mark'd which shews the Wood to come off.

TRUSSES for DOMES of Churches, &c.

A Is a Truſs for a Dome, with a Lanthorn or Cupola at the Top, to give Light. B the Plan; the Kirb or Plate to be in two Thickneſſes, which is likewiſe beſt for the Ribs, and for the Kirb on which the Cupola ſtands. The Curve of the Dome *A* is a Semi-circle, or will ſerve for a Semi-ellipſis. The Moulds *f* and *c* in the Plan B cut the Sweep of the Purlines; and the Moulds *b a* and *c d* are for the Top and Bottom of the Purlines. C is a Cone or Lanthorn to light a Stair-caſe, &c. the horizontal Bars muſt be ſquared in the ſame Manner, as the Purlines in A. The Mould for cutting or ſquaring the Purlines, is like the Bottom Mould *f* in B, ſo that if the Purlines be cut to the Thickneſs required as in the Section A, and alſo to the Mould *f*, then *a* is the Mould for the Bottom and *b* for the Top, as appears by the Lines let fall to the Plan B from the Purlines *g* and *h*; then C in the Plan is the top, and *d* the bottom Mould. *l* is the Sweep Mould for the Top of the Purline *h*. By this Rule the Purlines may be ſquared, which completes the Work. If in the Plan B, the Ribs and Purlines are in Size and Number as the Cone C, it will do for a Lanthorn or Light to a Stair-caſe, &c. the Manner of ſquaring the Ribs and Croſs Bars is the ſame as the Dome.

Trusses for the Domes of Churches &c.

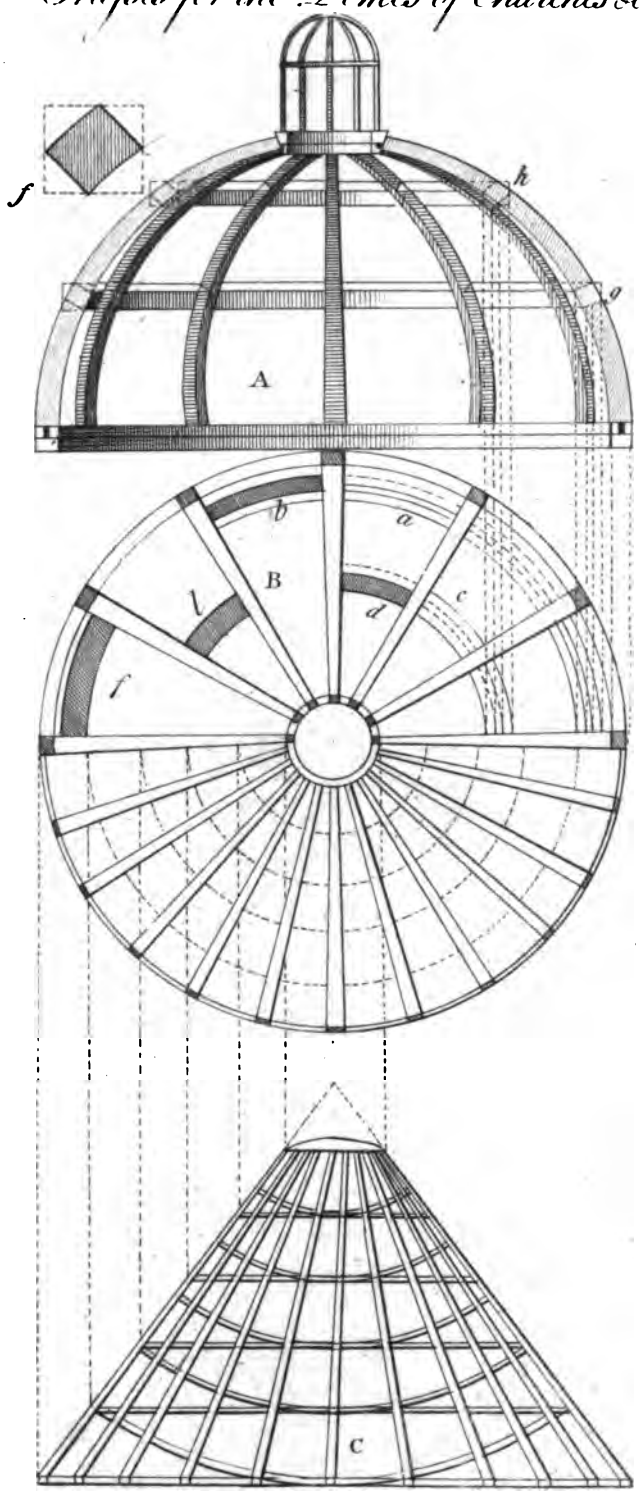
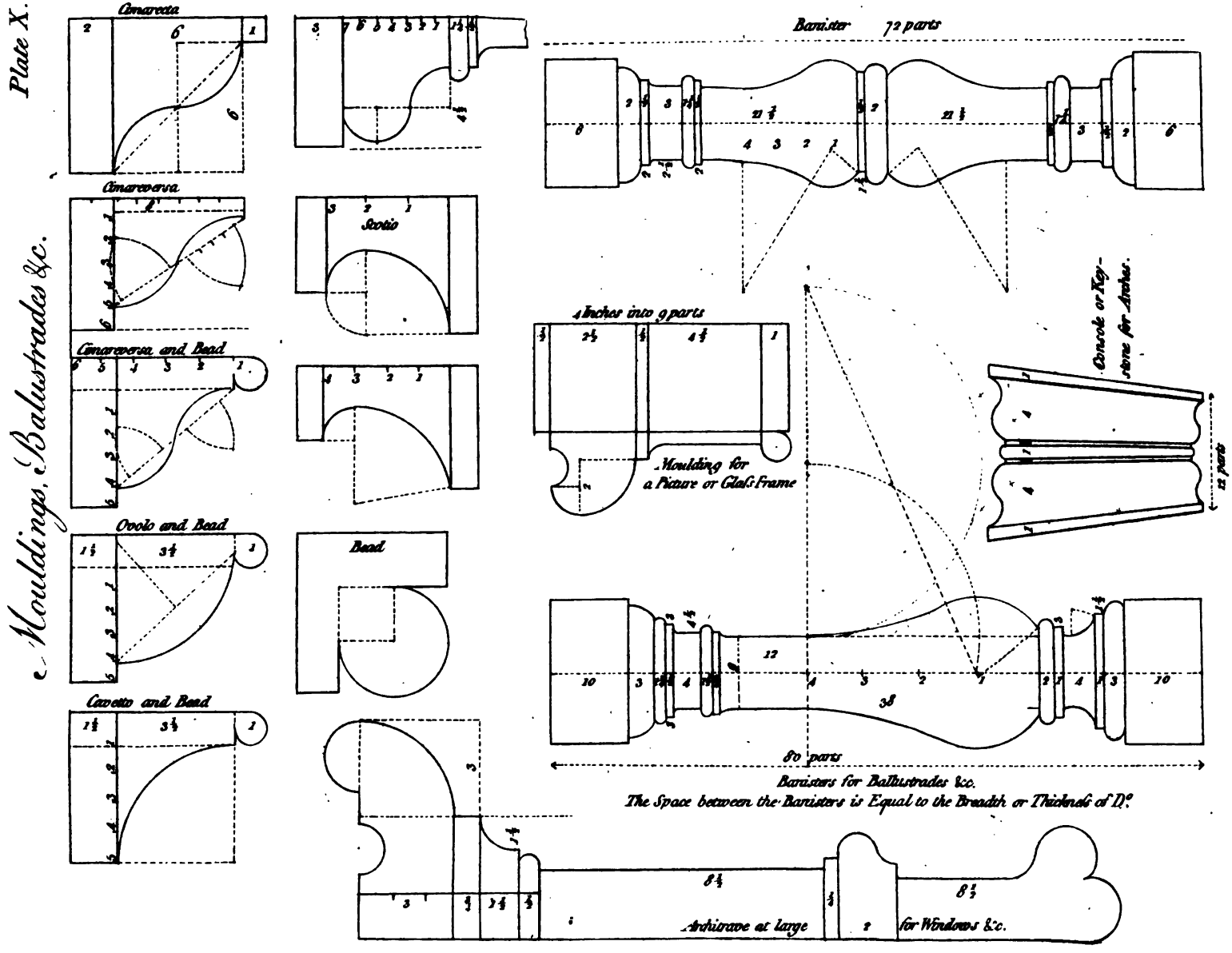


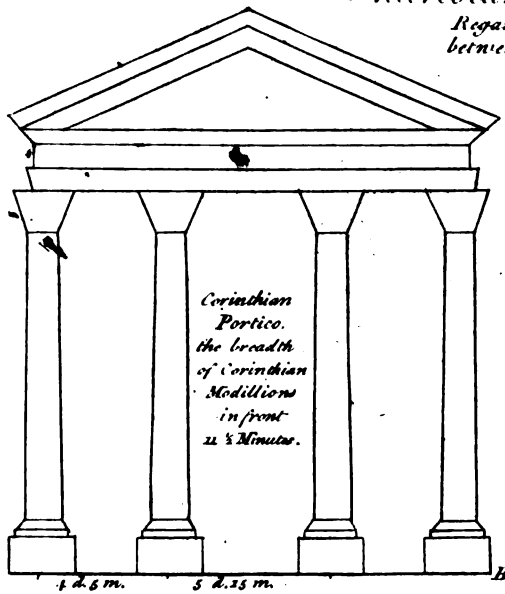
Plate X.

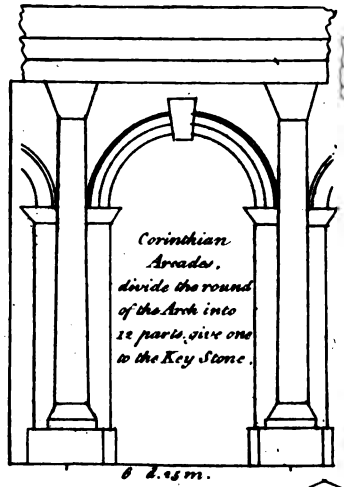
Mouldings, Balustrades &c.



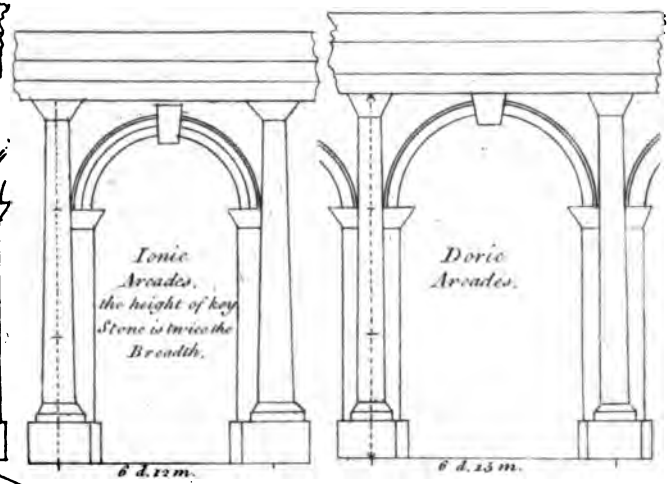
Intercolumniations for Portico's, Arcades, Colonades &c.

Regard must be had to the Number of Triglyphs, Modillions Dentels &c. between the Central lines of Columns Pilasters &c.

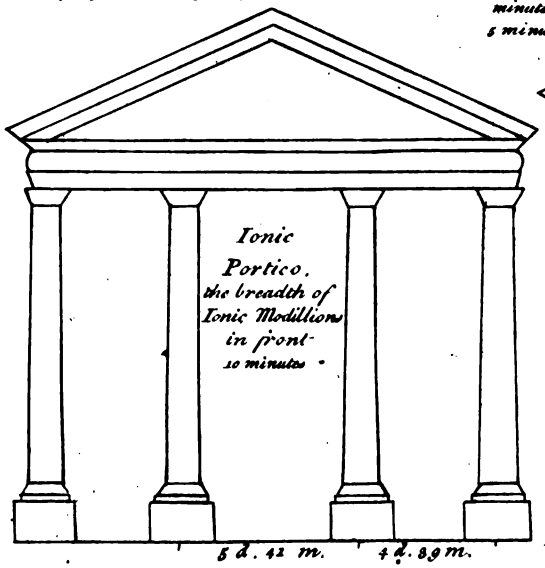


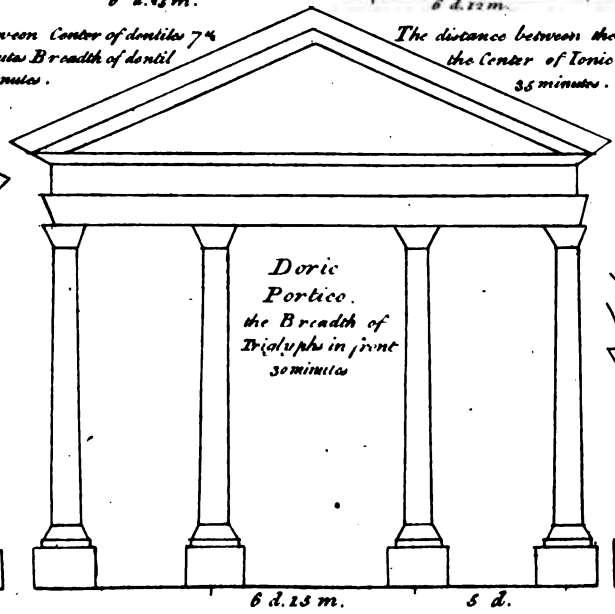


Between Center of dentiles 7 ½ minutes Breadth of dentil 5 minutes.



The distance between the Center of triglyphs is 75 minutes, between the Center of Ionic Modillions 31 minutes, Center of Corinthian 35 minutes.





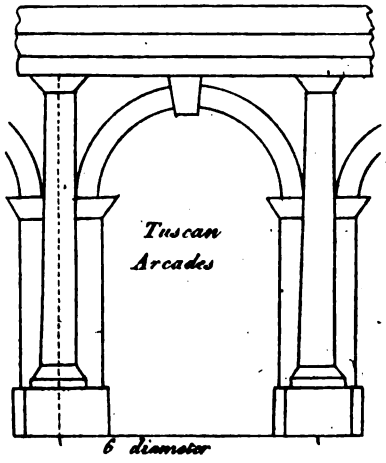
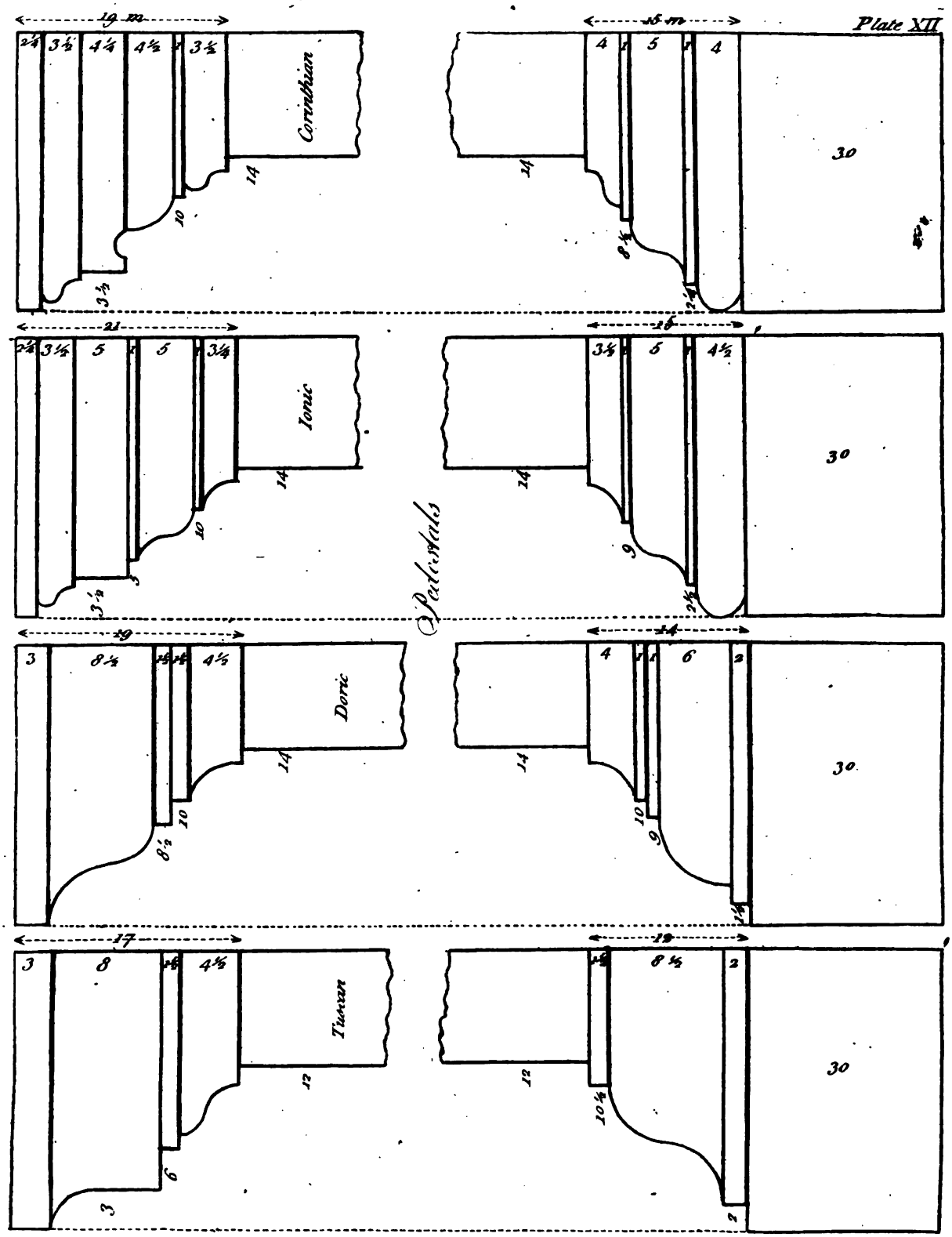


Plate XI

Plate XII


19 m
2½ 3½ 4½ 4½ 3½
Corinthian
14
10
3½
15 m
4 1 5 1 4
30
14
8½
2½
21
2½ 3½ 5 5 3¾
Ionic
14
10
3½
18
3½ 6 4½
30
14
9
2½
Peristyle
29
3 8½ 4½
Doric
14
10
8½
14
4 1 1 6 2
30
14
10
9
1½
17
3 8 4½
Tuscan
12
6
3
12
8½ 2
30
12
10½
2

To Proportion the ORDERS on a Pedeſtal to any given Height.

THE Tuſcan Order. Divide the given Height *a b* into five equal Parts, give one to the Pedeſtal; then divide the remaining Height *c d* alſo into five equal Parts, and give one to the Entablature; the remaining four Parts *e f*, which is the Shaft of the Column, including the Baſe and the Capital, divide into ſeven Parts; one of which is the Diameter of the Column, which is to be divided into ſix Parts, and one of theſe into ten Parts, called Minutes; which is a Scale to work by. For the Height and Projection of the Mouldings the Minutes are figured to each Order on the Plate.

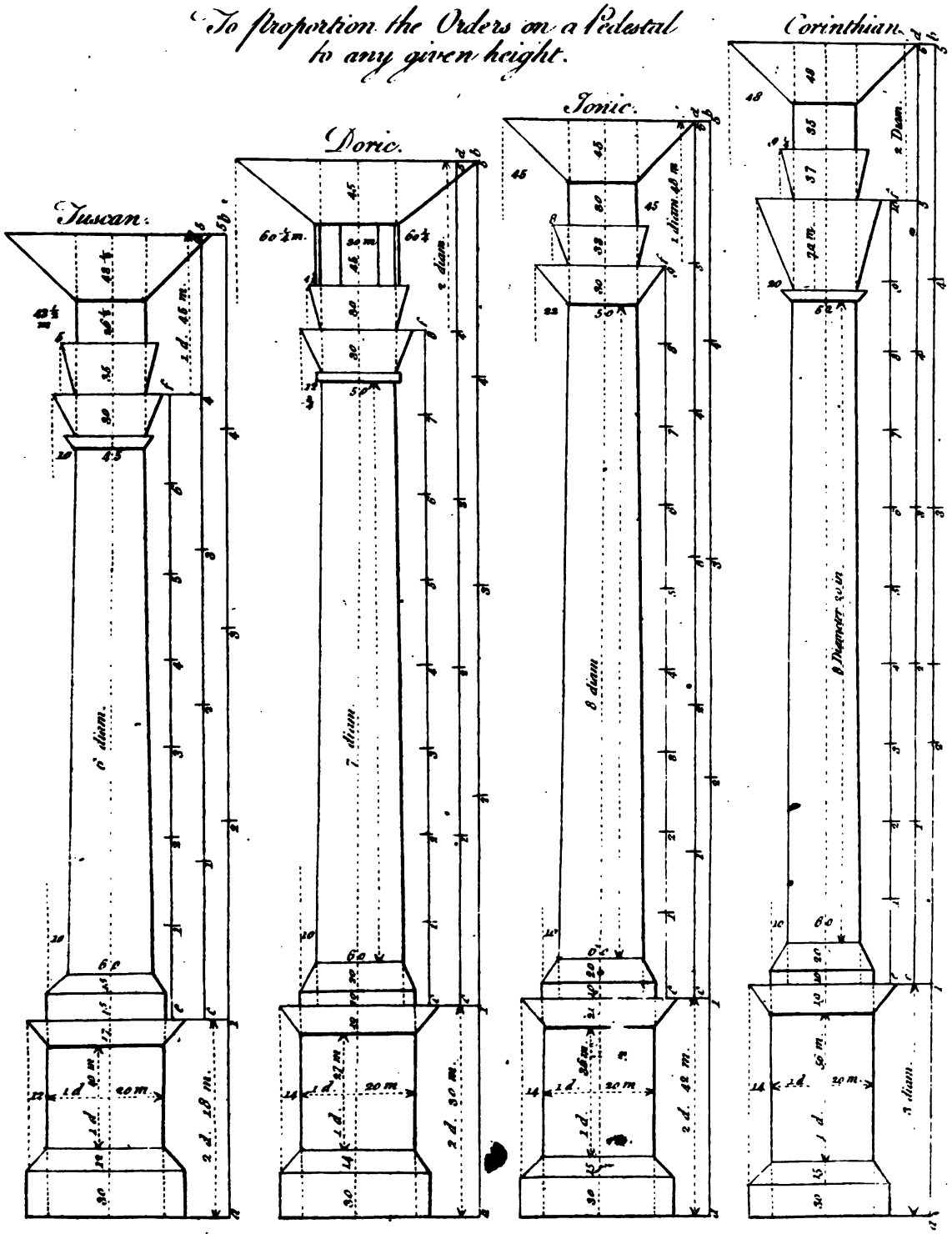
Doric Order. Divide the Height *a b* into five equal Parts, give one to the Pedeſtal; then divide the remaining Height *c d* into five equal Parts alſo, and give one to the Entablature; the remaining Space *e f*, divided into eight equal Parts, gives the Diameter of the Column; divide as before for the Minutes.

Ionic Order. Having divided *a b* as before, and given one fifth Part for a Pedeſtal; divide *c d* what remains, into ſix Parts, one is for the Entablature, equal to one Diameter and forty-eight Minutes; then divide *e f* into nine Parts, one of which is the Diameter of the Column. The Minutes may be found as in the Tuſcan Order.

Corinthian Order. Of five equal Parts in *a b* give one to the Pedeſtal; divide *c d* into ſix equal Parts, one is for the Entablature, equal to two Diameters; then divide the remaining Height *e f* into ten Parts; one is the Diameter of the Column. The Minutes to be found as in the Tuſcan Order.

The Compoſite Order is made after the ſame Proportions as the Corinthian.

To proportion the Orders on a Pedestal to any given height.



To Face PLATE XIV.

To Proportion the ORDERS on a Sub-plinth.

When the Orders are executed without Pedeſtals, the following Proportions may be obſerved.

THE Tuſcan Order. Divide the given Height into ten equal Parts, one of which is the Diameter of the Column; give one to the Sub-plinth, and one Diameter and three quarters or forty-five Minutes to the Entablature. The Minutes to be found as before directed in the Tuſcan Order, Plate XIII.

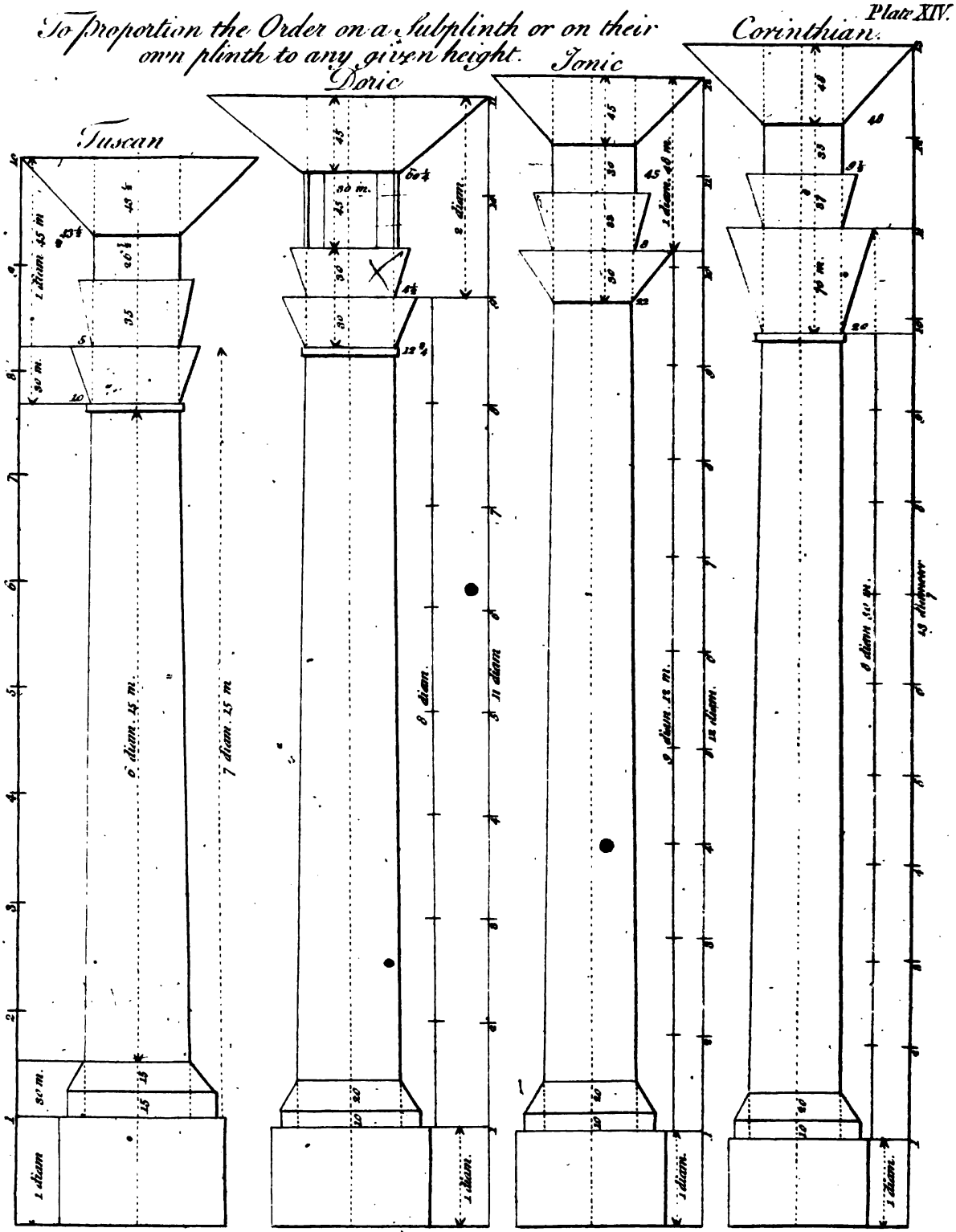
The Doric Order. Divide the Height into eleven Parts; one is the Diameter of the Column. To the Sub-plinth give one Diameter, and to the Entablature two Diameters.

The Ionic Order. Divide the Height into twelve Parts; one is the Diameter of the Column; give one to the Sub-plinth, and one Diameter and forty-eight Minutes to the Entablature.

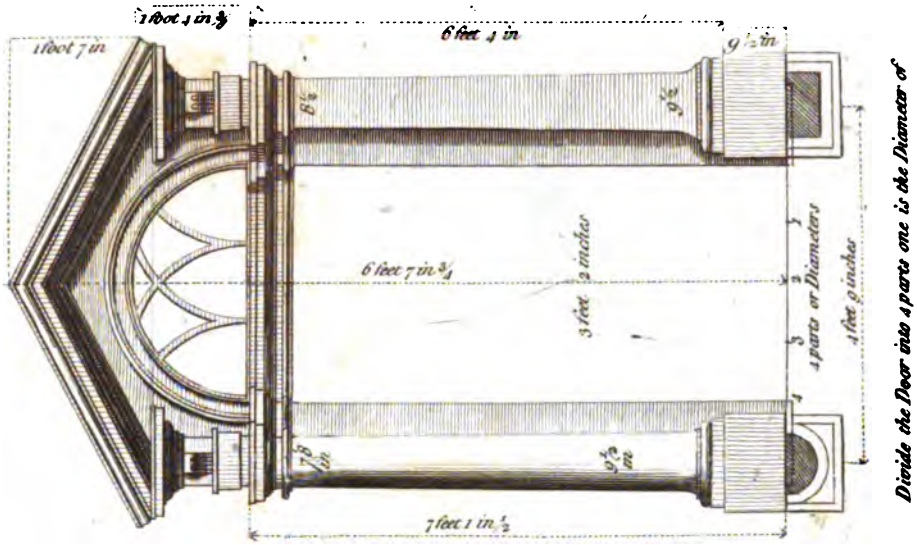
The Corinthian Order. Divide the Height into thirteen Parts; one is the Diameter of the Column, the ſame for the Sub-plinth. The Entablature requires two Diameters.

For the Compoſite Order the ſame Proportions will do as in the Corinthian.

To Proportion the Order on a Subplinth or on their own plinth to any given height.



Frontispice in the Tuscan Order.

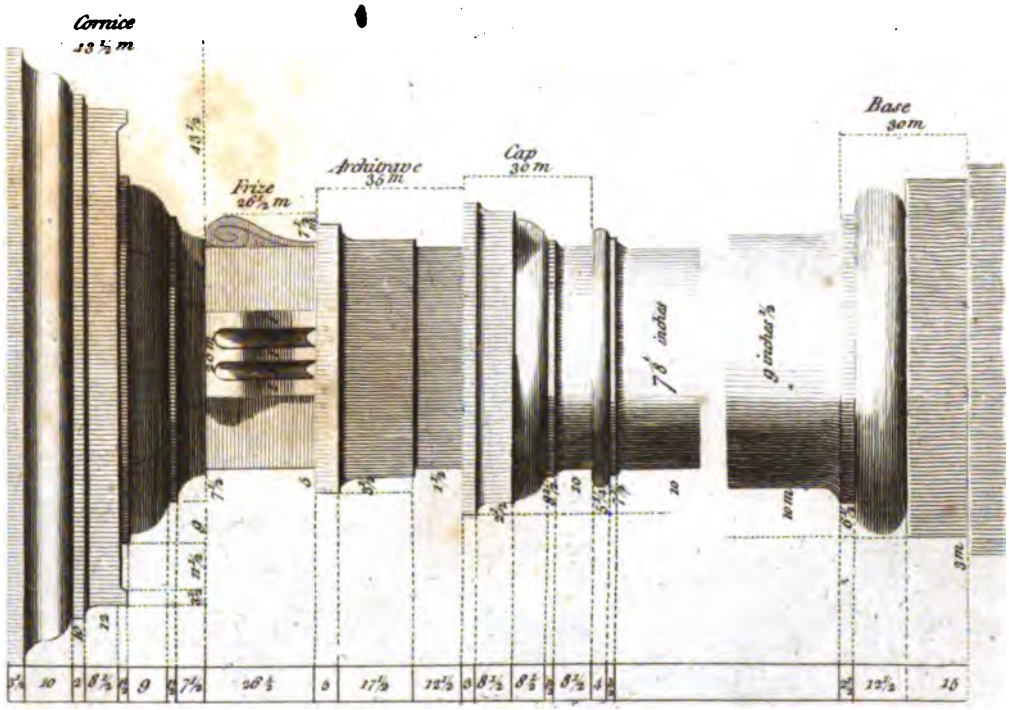

1 foot 4 in ½
6 feet 4 in
1 feet 7 in
9 ½ in
6 ½
9 ½
6 feet 7 in ¾
3 feet 2 inches
7 ½ in
9 ½ in
7 feet 1 in ½
Divide the Door into 4 parts one is the Diameter of the Pilaster
4 parts or Diameters
4 feet 9 inches

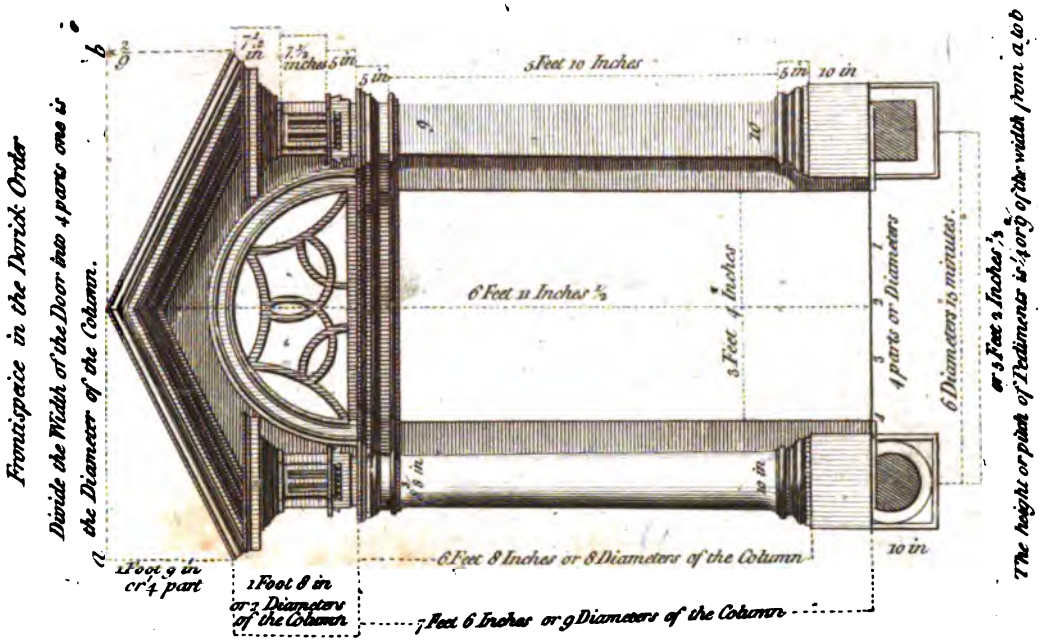
A Scale of one Module.

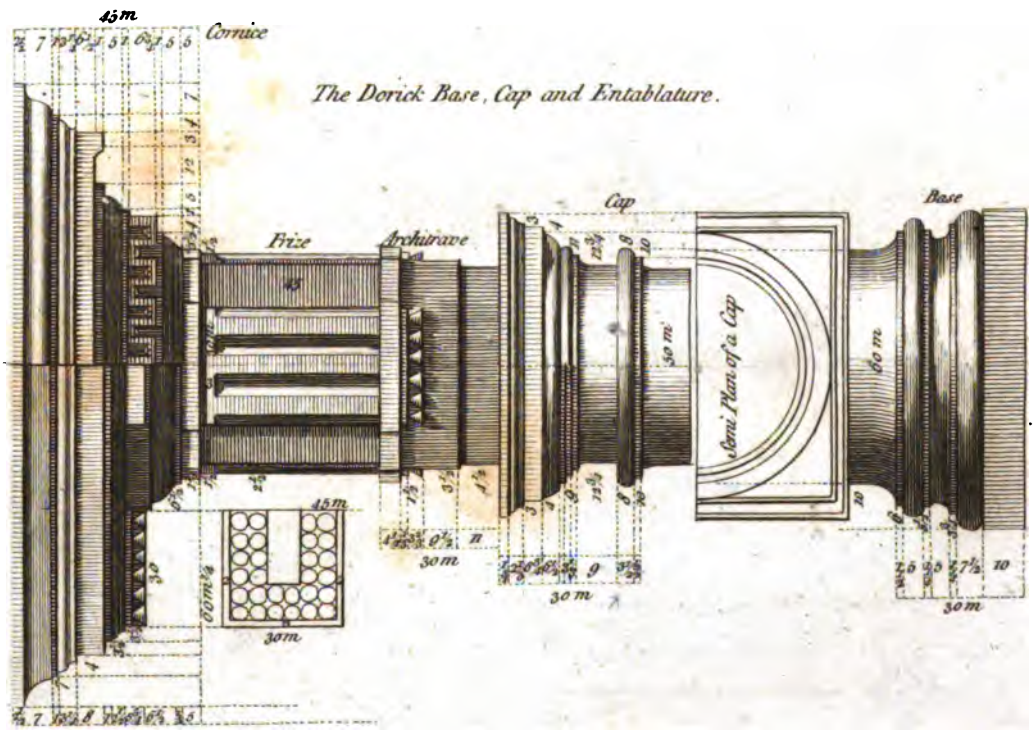
5 10 20 30 40 50 60 min.

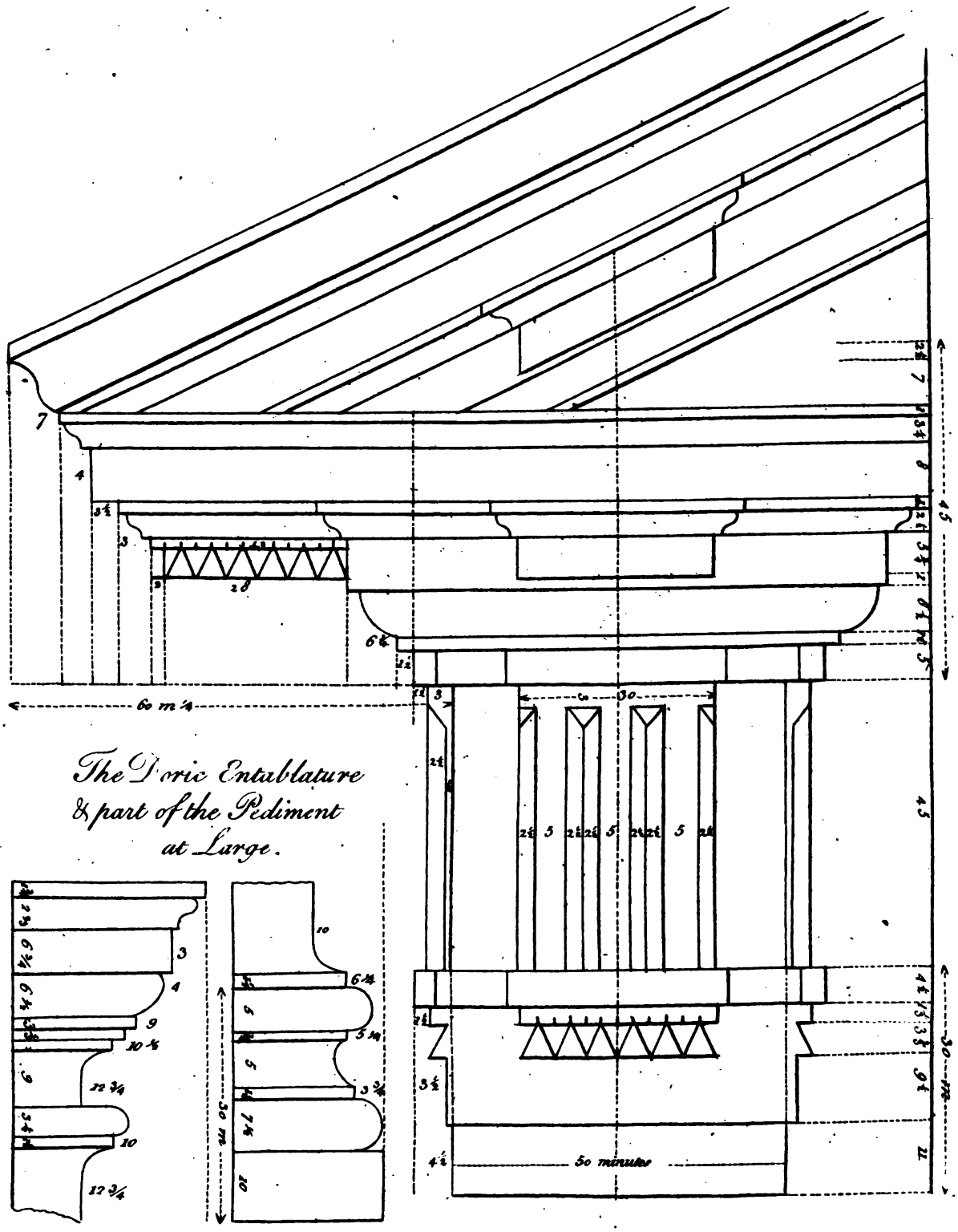
Divide the given Module into 12 parts and one of those parts into 5 gives the Minutes.

The Tuscan Entablature.




Frontispeice in the Dorick Order
Divide the Width of the Door into 4 parts one is the Diameter of the Column.
5 Feet 10 Inches
6 Feet 11 Inches ½
3 Feet 4 Inches
4 parts or Diameters
6 Diameters is minutes.
or 3 Feet 2 Inches ½
The height or plint of Pedimants is ⅓ or ⅔ of the width from a to b
6 Feet 8 Inches or 8 Diameters of the Column
7 Feet 6 Inches or 9 Diameters of the Column
1 Foot 9 in or 4 part
1 Foot 8 in or 2 Diameters of the Columen

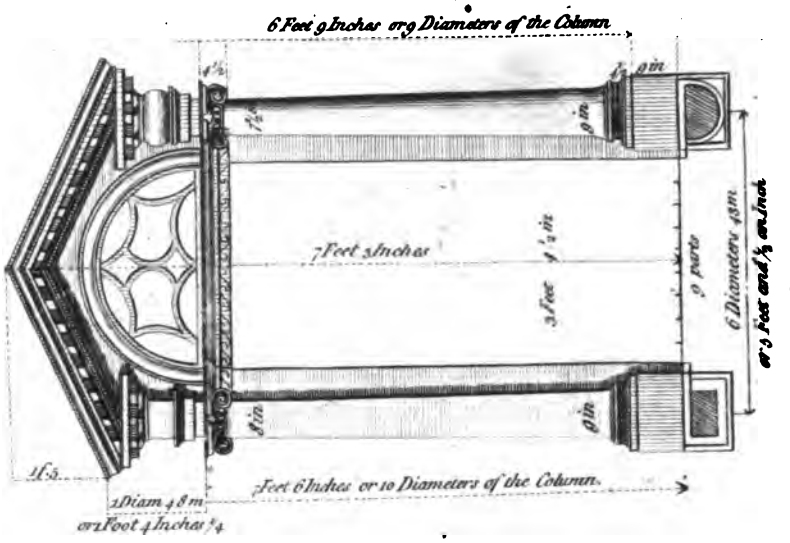

The Dorick Base, Cap and Entablature.
Cornice
Frize
Architrave
Cap
Base
Semi Plan of a Cap
45m
30m
60m



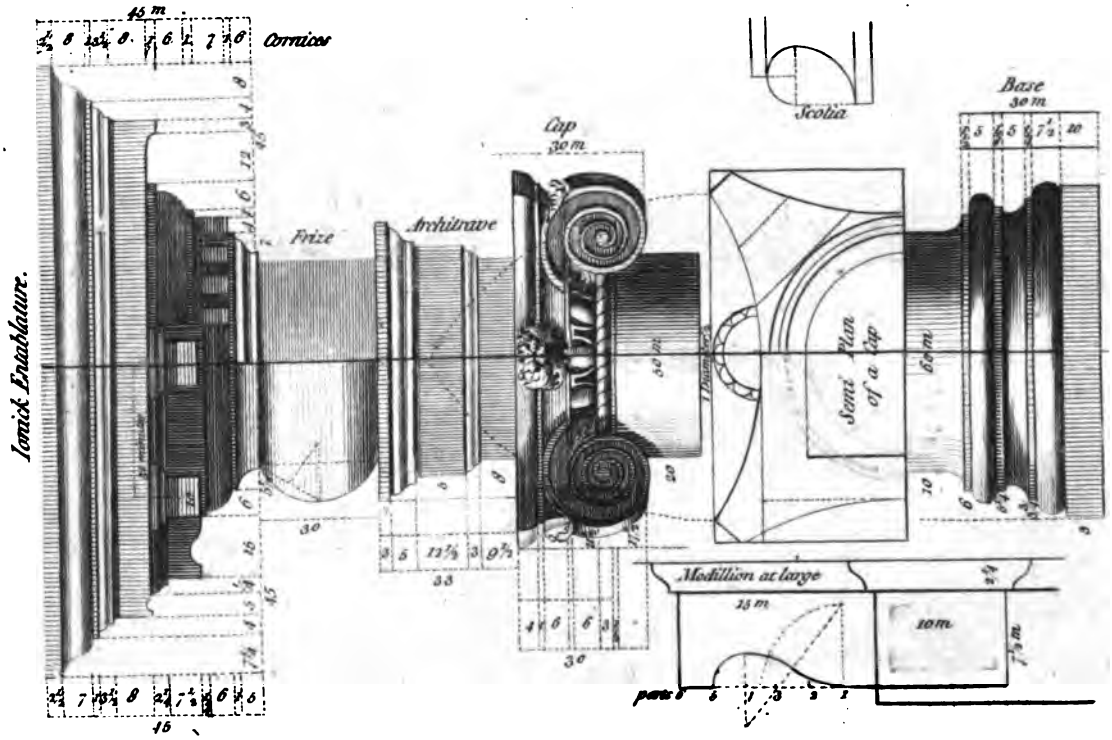
The Doric Entablature & part of the Pediment at Large.

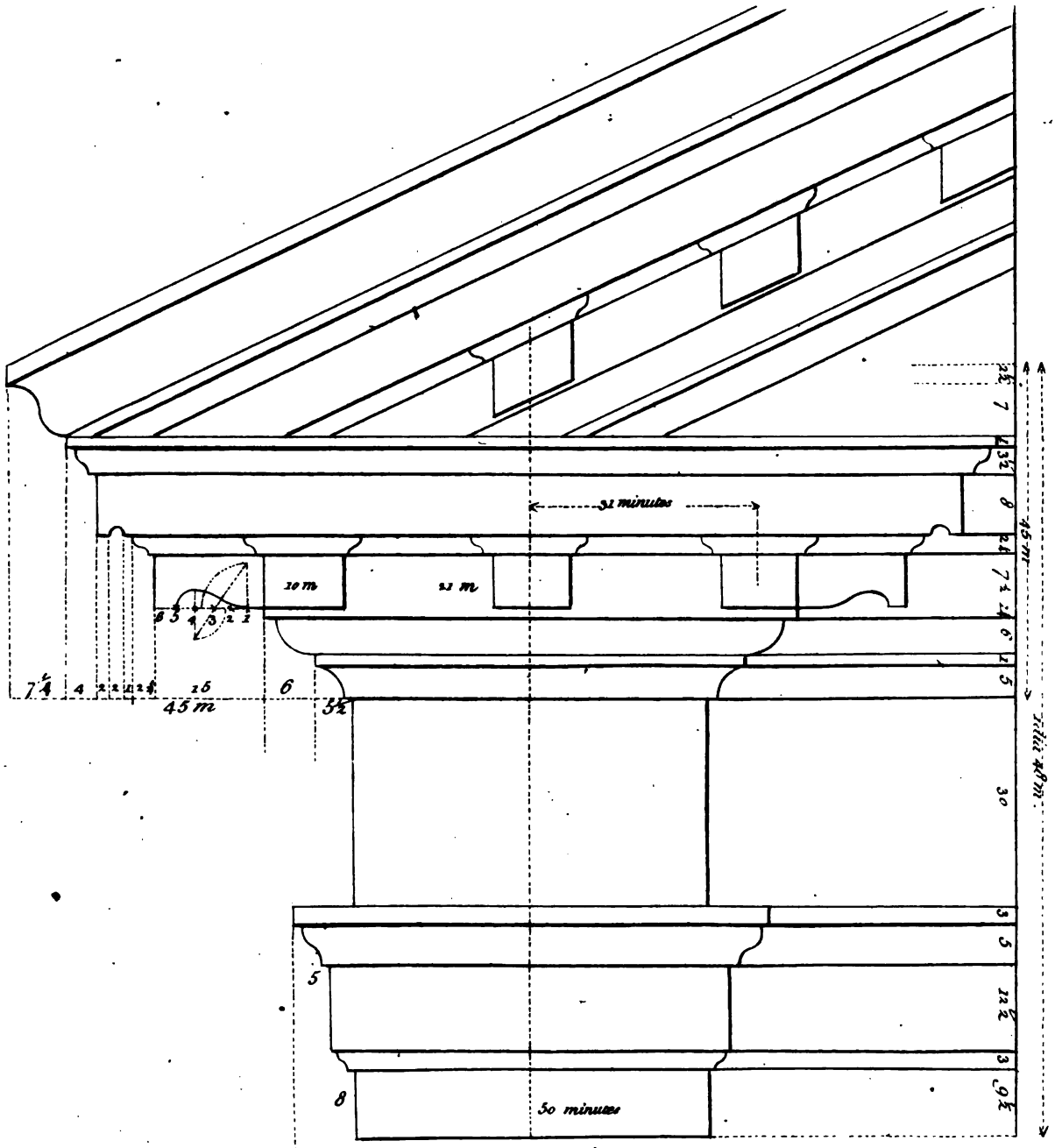
Frontispeice in the Ionick Order.

15 Modillions between the Cetral lines of the Columns 31 minutes from Center to Center of the Modillions.
Divide the Width of the Door into 9 parts, each part is equal to half the Columns Diameter or 4 Inches 1/2.

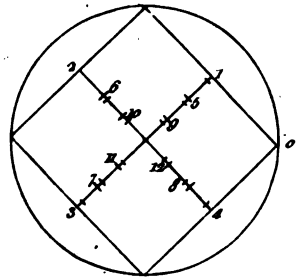

6 Feet 9 Inches or 9 Diameters of the Column
7 Feet 3 Inches
3 Feet 9 1/2 in
9 parts
6 Diameters 43 m.
or 3 Feet and 1/2 an Inch
1 Diam 48 m
or 1 Foot 4 Inches 3/4
7 Feet 6 Inches or 10 Diameters of the Column

Ionick Entablature.

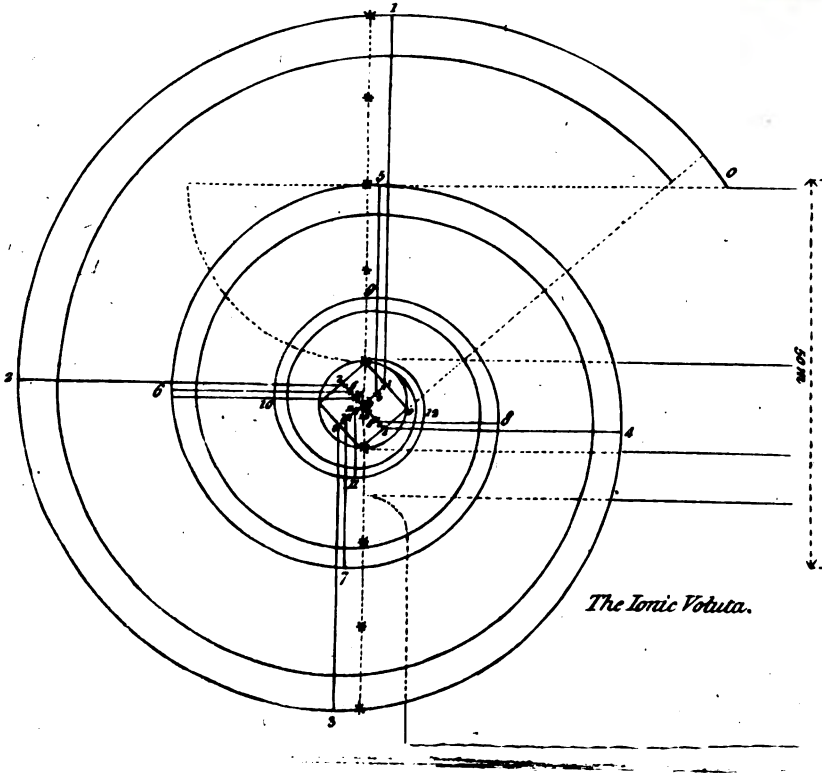




The Ionic Entablature with part of the Pediment at Large.

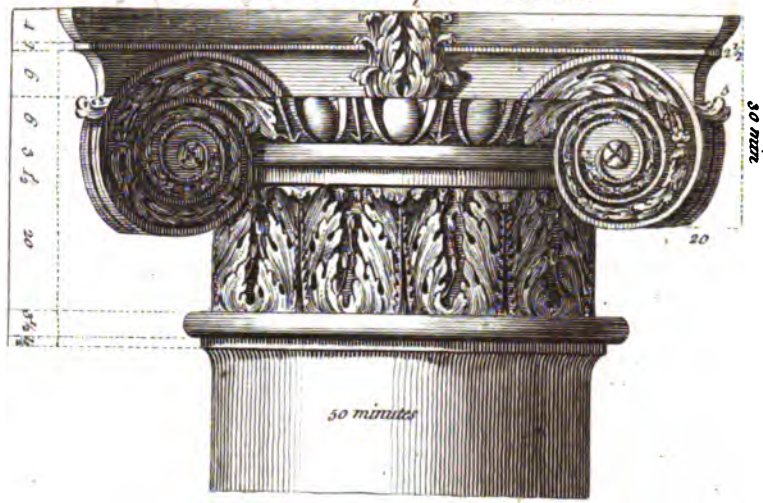


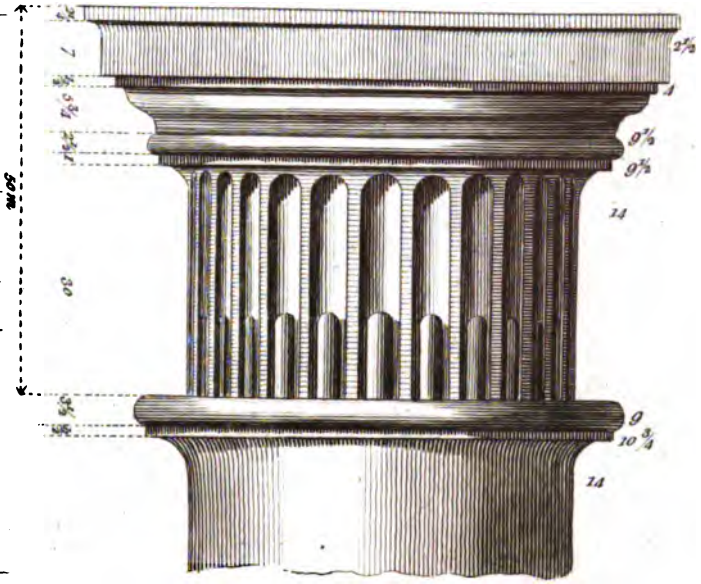
The Eye of the Voluta at large.



The Ionic Voluta.

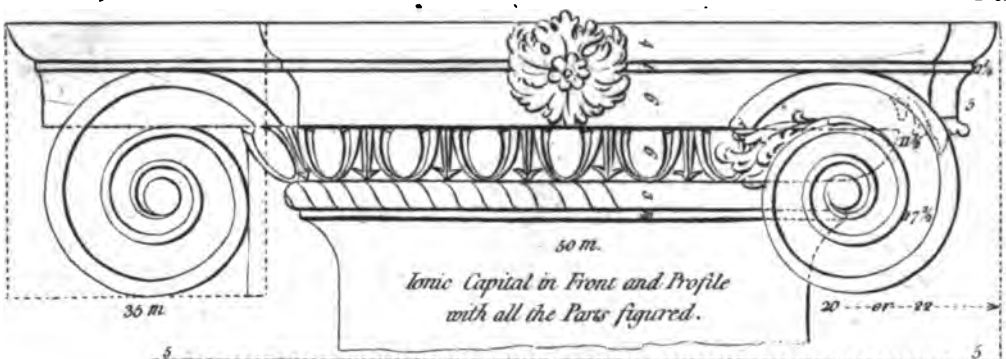
A Modern Ionic Capital with Leaves



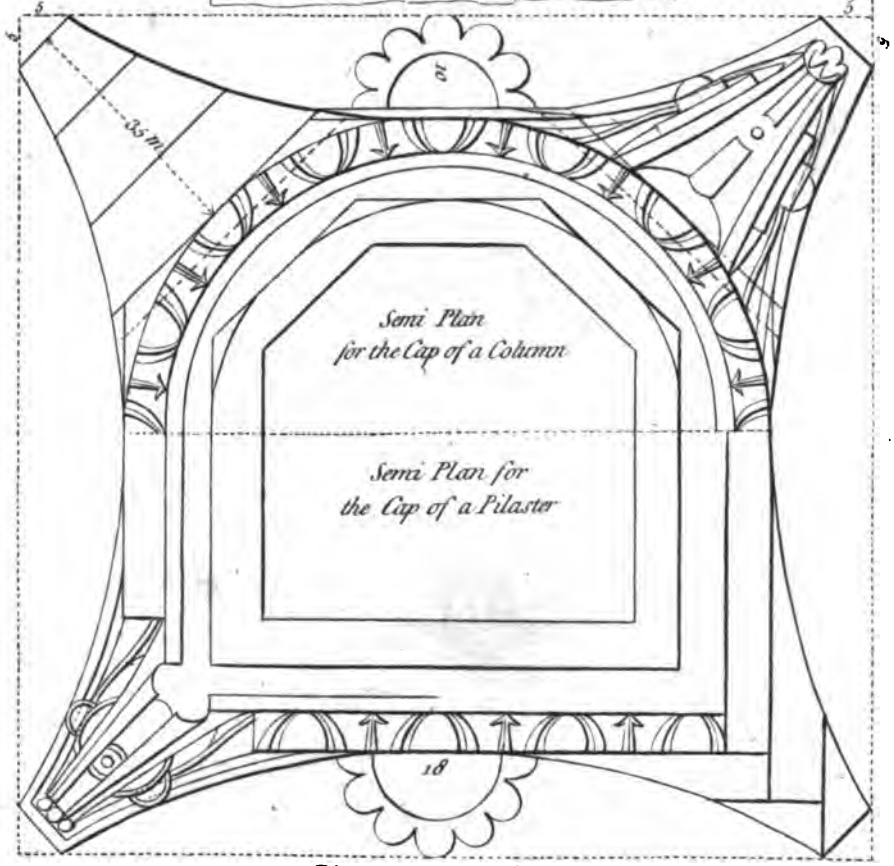


A Composed Cap for a Column.

Plate XX.

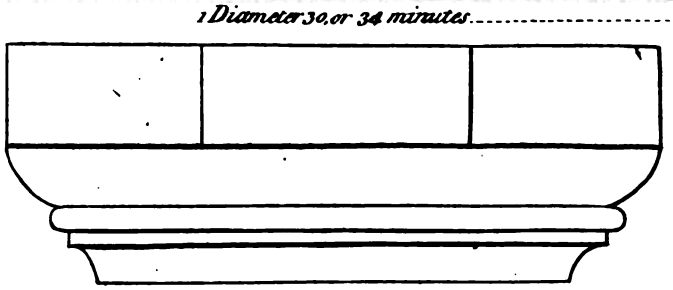


Ionic Capital in Front and Profile with all the Parts figured.



1 Diameter 30, or 34 minutes.

The Body of the Cap with the Mouldings worked before the Horns are Glued on.



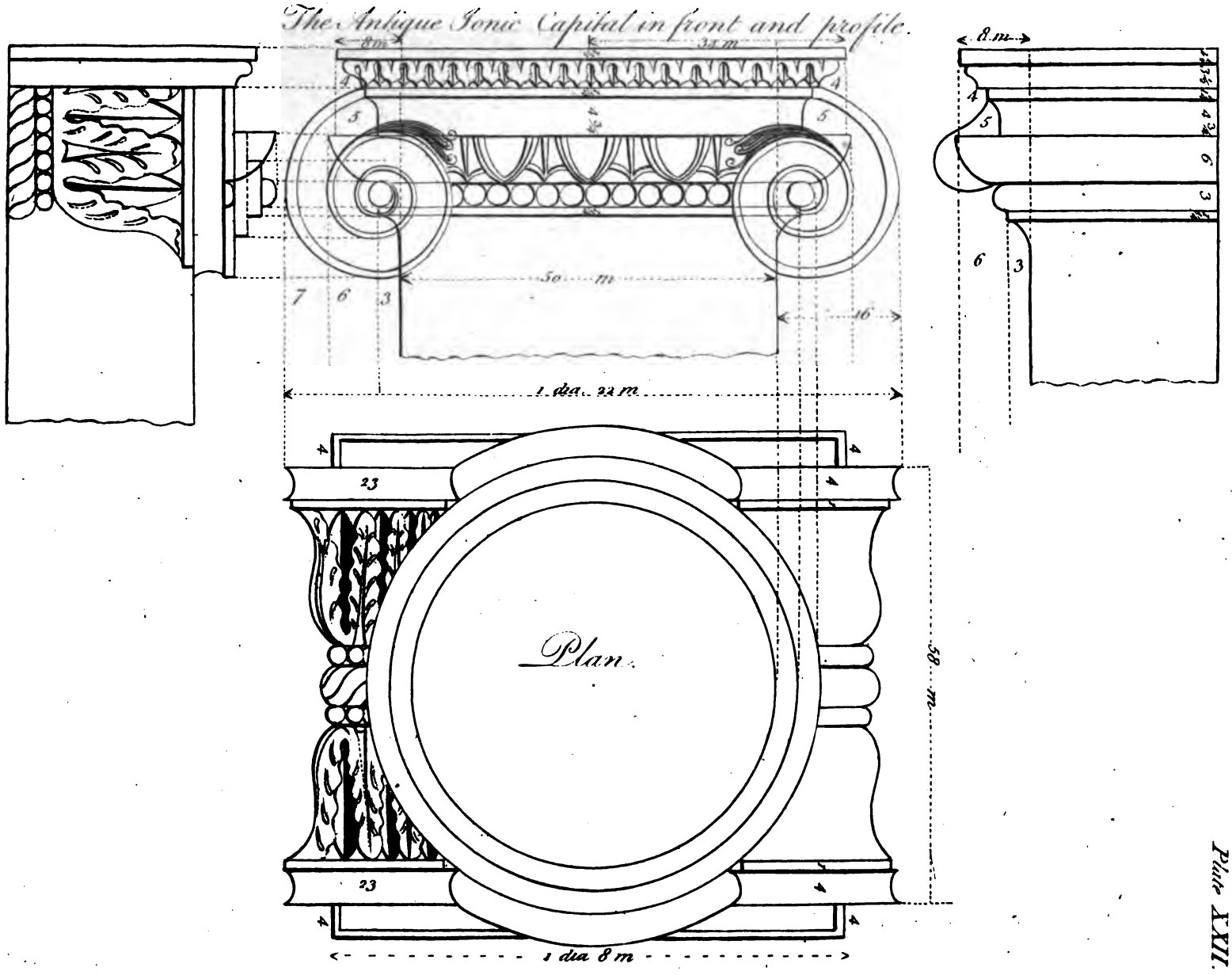
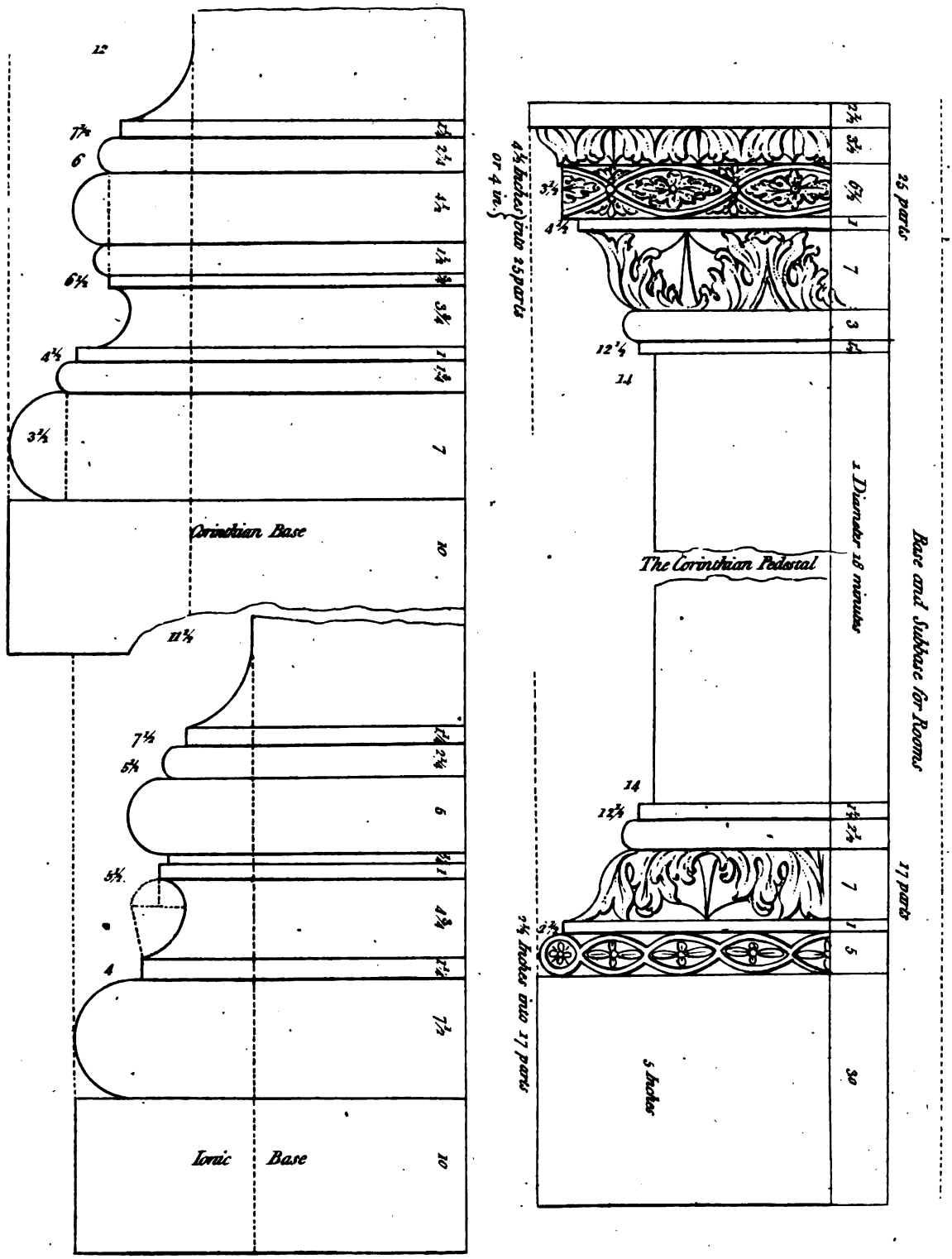
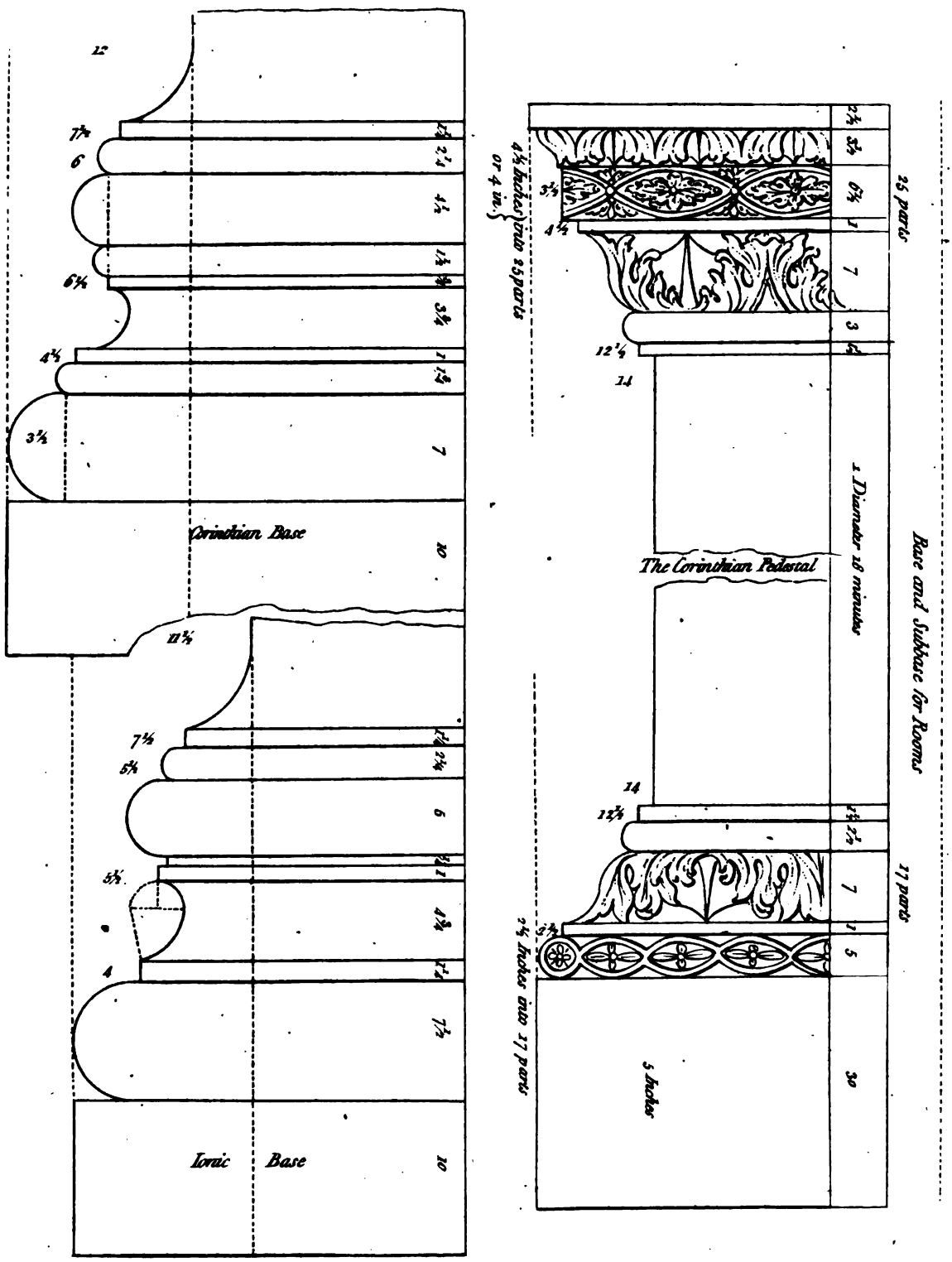
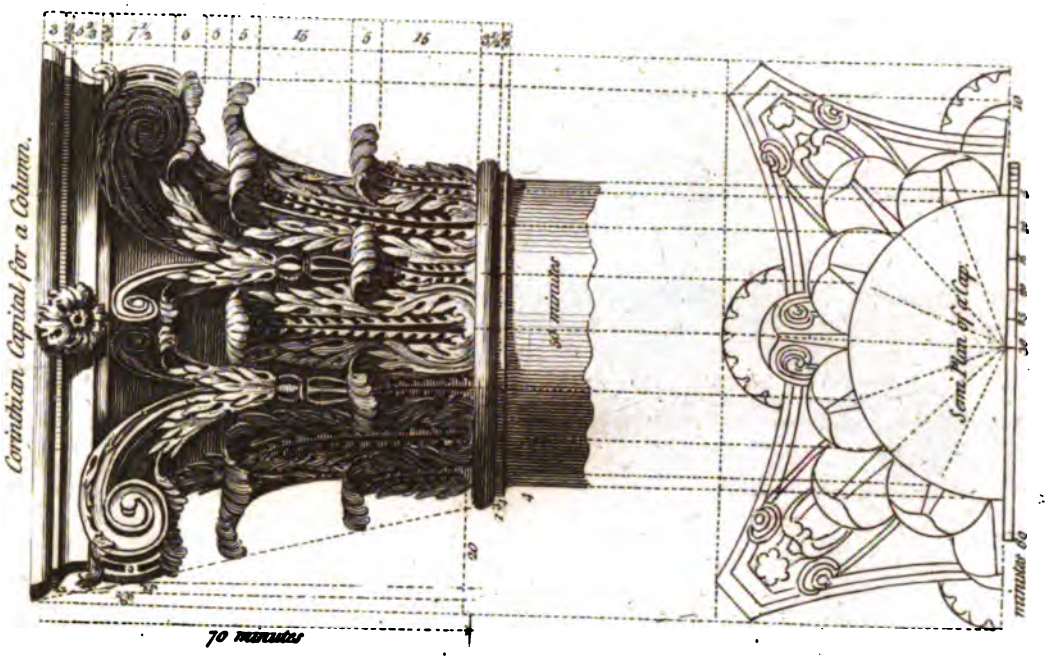
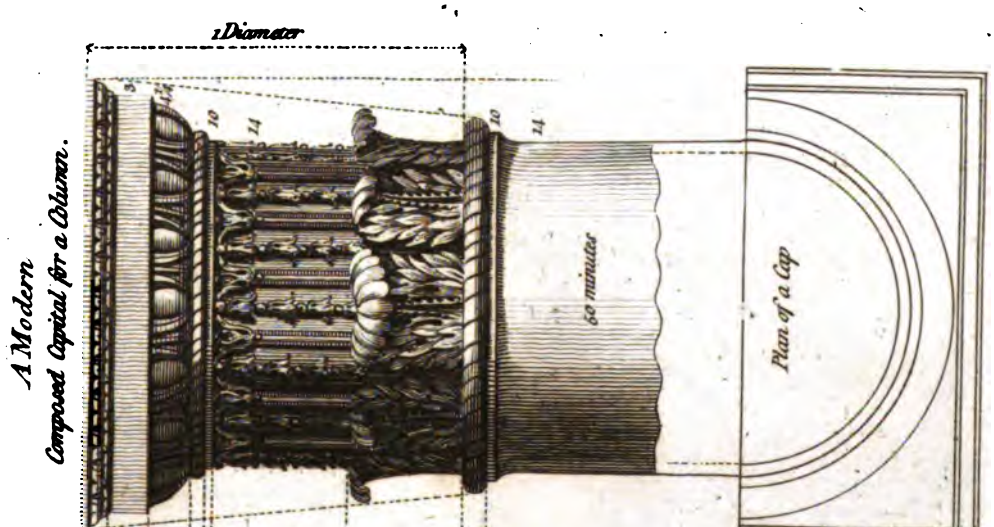

The Antique Ionic Capital in front and profile.
8m
33 m
8 m
50 m
16
1 dia. 22 m
Plan.
58 m
1 dia 8 m

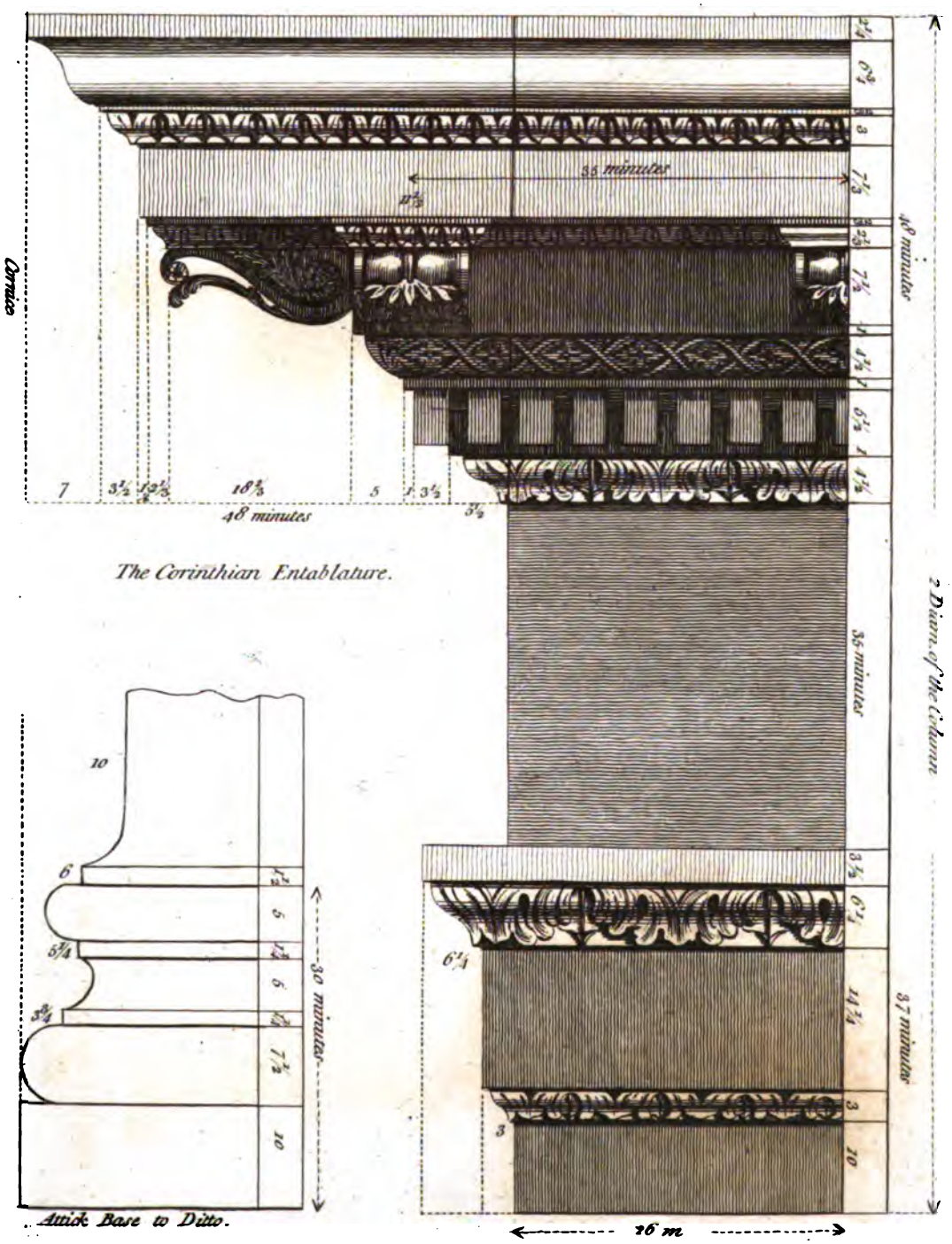
Plate XXII.


12
7⅞
6
6½
4½
3½
Corinthian Base
11½
7½
5⅞
5½
4
Ionic Base
4½ Inches into 25 parts or 4 in.
25 parts
Base and Subbase for Rooms
1 Diameter 18 minutes
The Corinthian Pedestal
12½
14
17 parts
2¼ Inches into 17 parts
5 Inches


12
7½
6
6¼
4¾
3½
Corinthian Base
10
11½
7½
5⅞
5½
4
Ionic Base
10
4½ Inches into 25 parts or 4 in.
25 parts
1 Diameter 18 minutes
Base and Subbase for Rooms
The Corinthian Pedestal
14
12⅔
11 parts
2¾ Inches into 11 parts
3 Inches
30


Corinthian Capital for a Column.
70 minutes
Semi Plan of y Cap
minutes 80


A Modern
Composed Capital for a Column.
1 Diameter
60 minutes
Plan of a Cap



The Corinthian Entablature.

Attick Base to Ditto.

To Face PLATE XXVI.

The Manner of Gluing up the CORINTHIAN CAPITAL.

DRAW half the Plan 1, 2, 3, 4, then draw the Elevation of the Cap Fig. A, wherein the body of the Cap is glued up, as 1, 2, 3, 4, in Cants upright, with the Grain the ſame as the Shaft of the Column, and the upper Part is a Solid, as repreſented by *a*, *b*, *c*, *d*, which contains the Abacus and Volutes; the Tops of the two Tier of Leaves are glued on ſeparate, as *e*, *f*, *g*, *h*, *j*, *k*, *l*, which is plain to Inſpection.

Note, The upper Part *a*, *b*, *c*, *d*, to be ſquare, as on the Plan 1, 2, 3, 4, this ſhews one half of the Cap, which is ſufficient to explain the whole.

The Bell of the Cap is ſunk two Minutes and an half lower than the Surface of the Body, and the whole Projection of the Bell ſix Minutes, as figured.

The manner of gluing up the Corinthian Capital. Plate XXVI

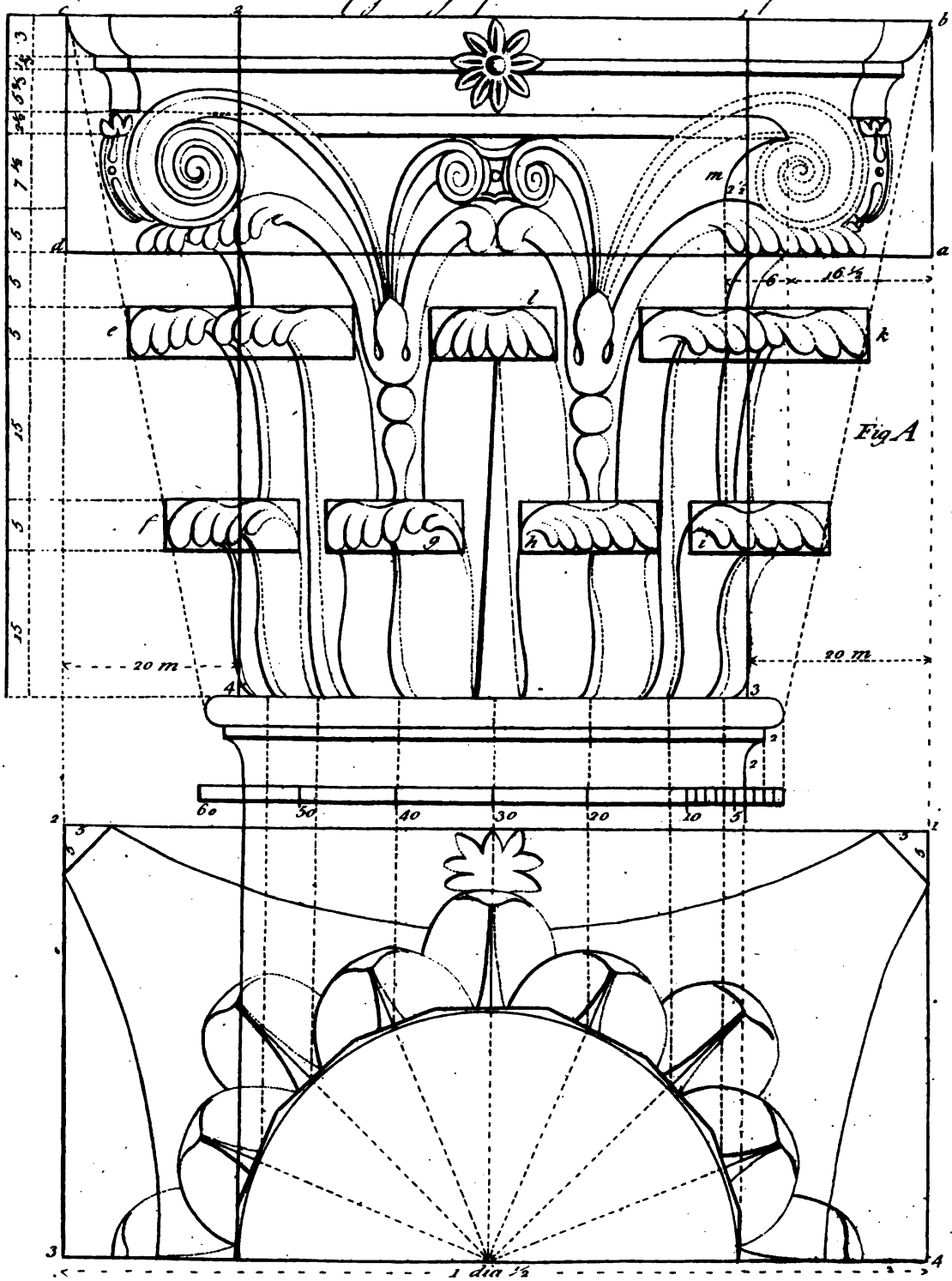
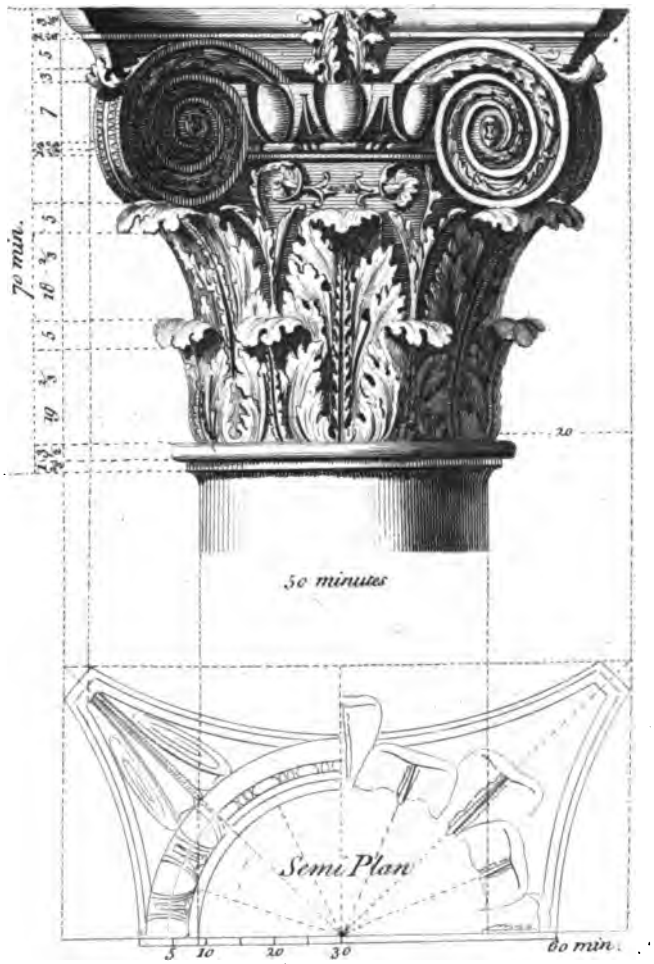


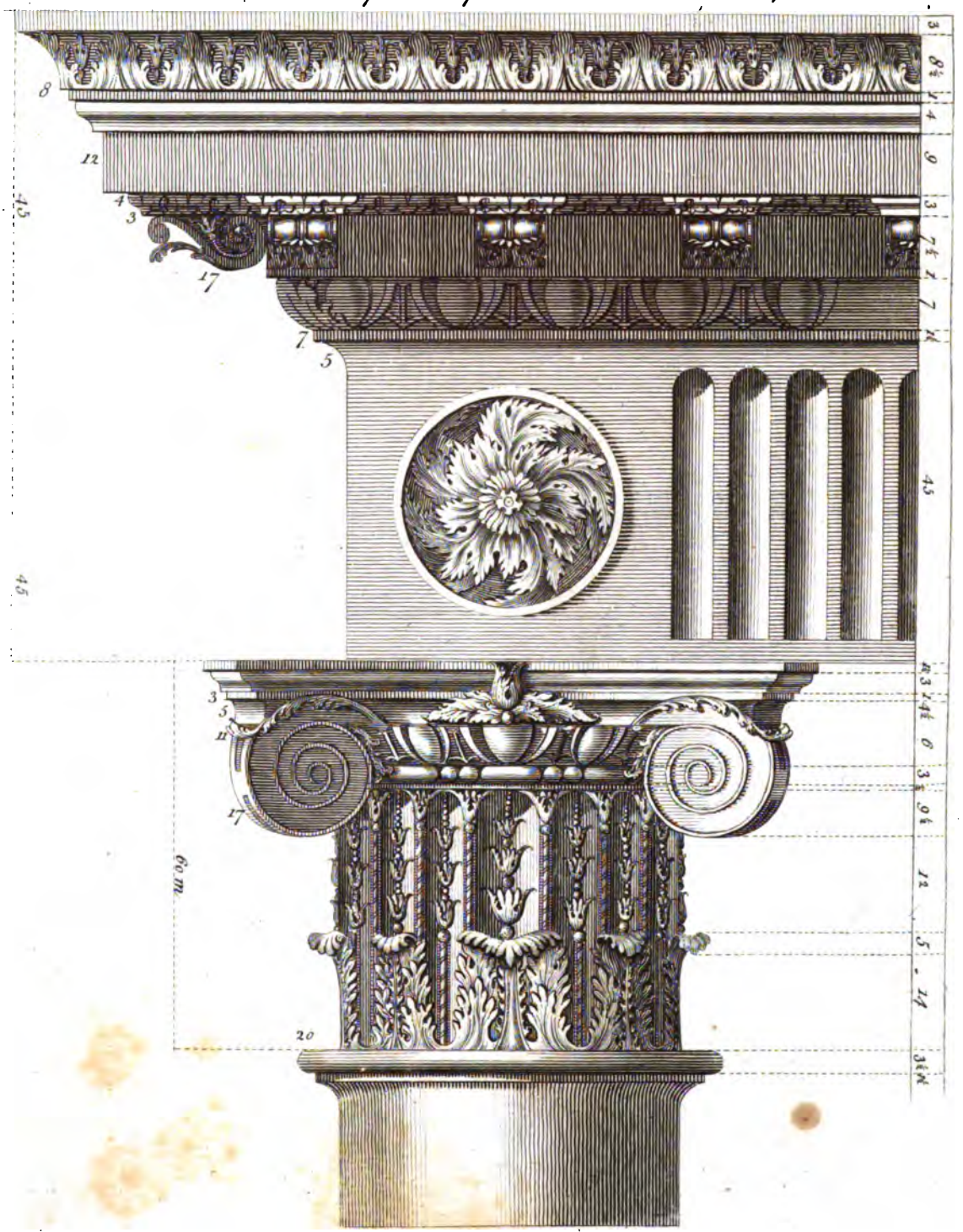
Plate XXVII.

The Antient Composite or Roman Capital



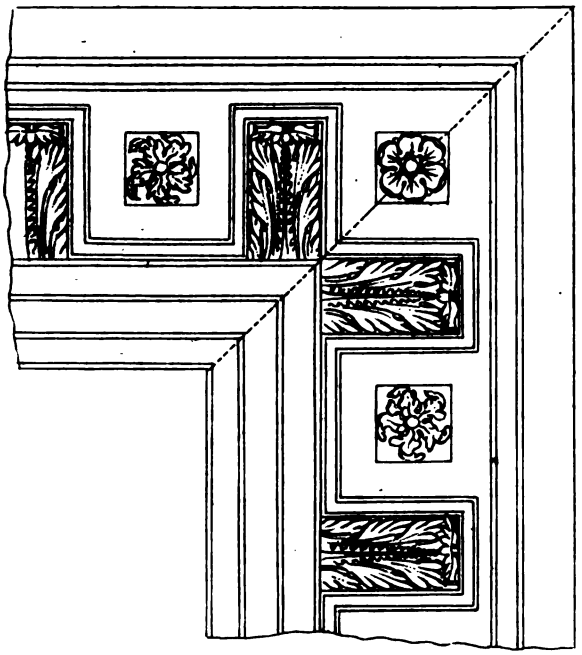
The Proportions of Composite Entablature are the same as the Corinthian.

A Modern Compos'd Capital and Entablature:

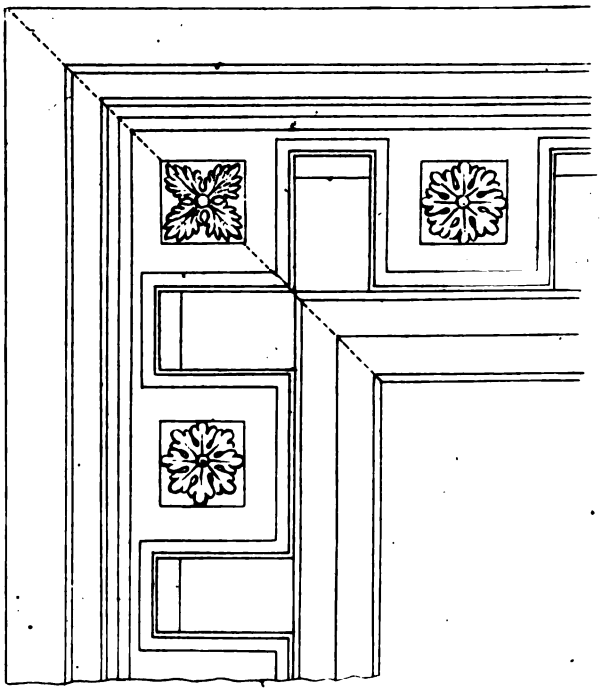


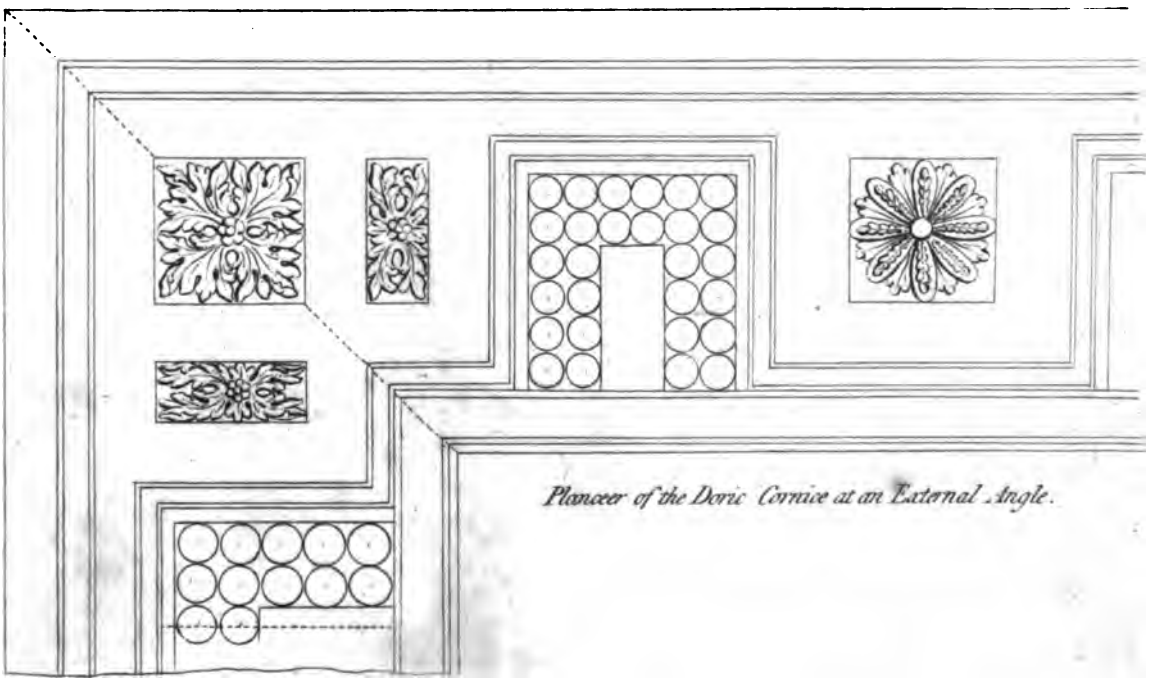
may be used with the Attic Base.

Planceer of the Corinthian Cornice at an External Angle.



Planceer of the Ionic Cornice at an External Angle.

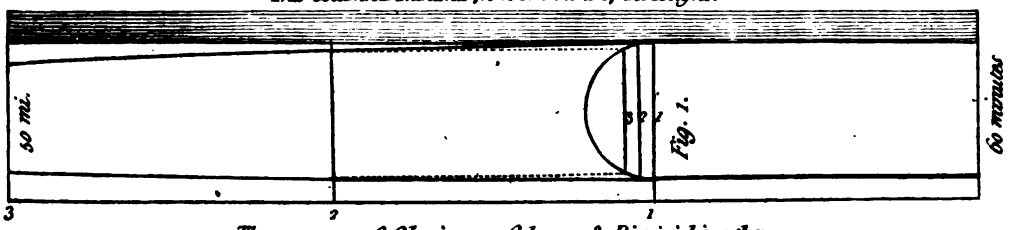




Planceer of the Doric Cornice at an External Angle.

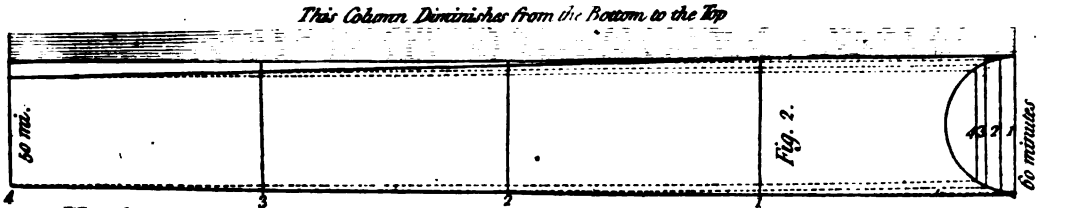
Glueing of Columns.

This Column Diminishes from one third of the Height.



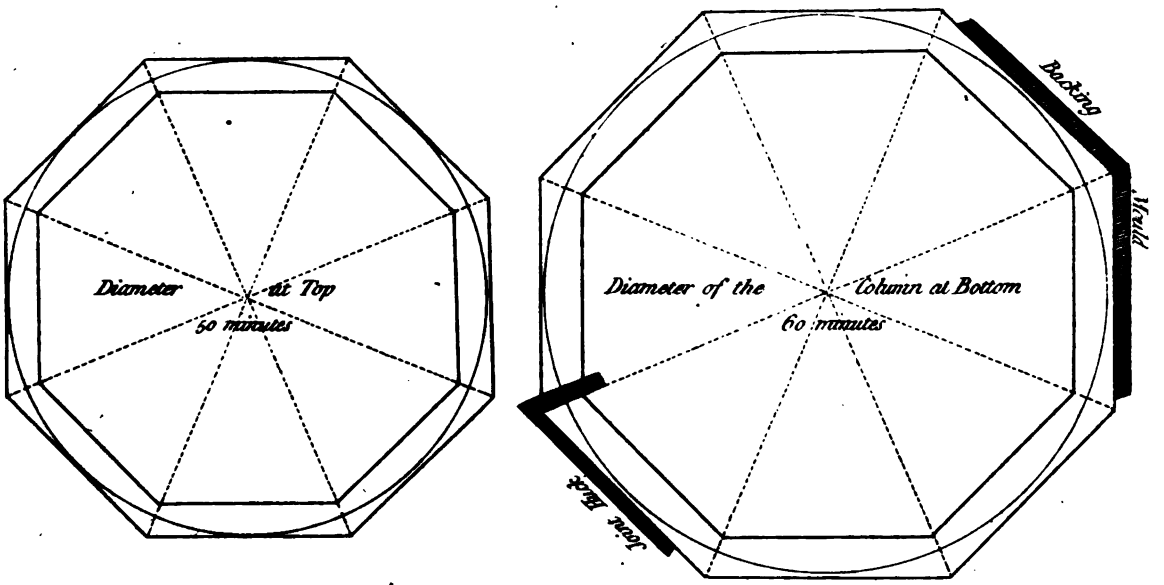
The manner of Glueing up Columns & Diminishing them

This Column Diminishes from the Bottom to the Top



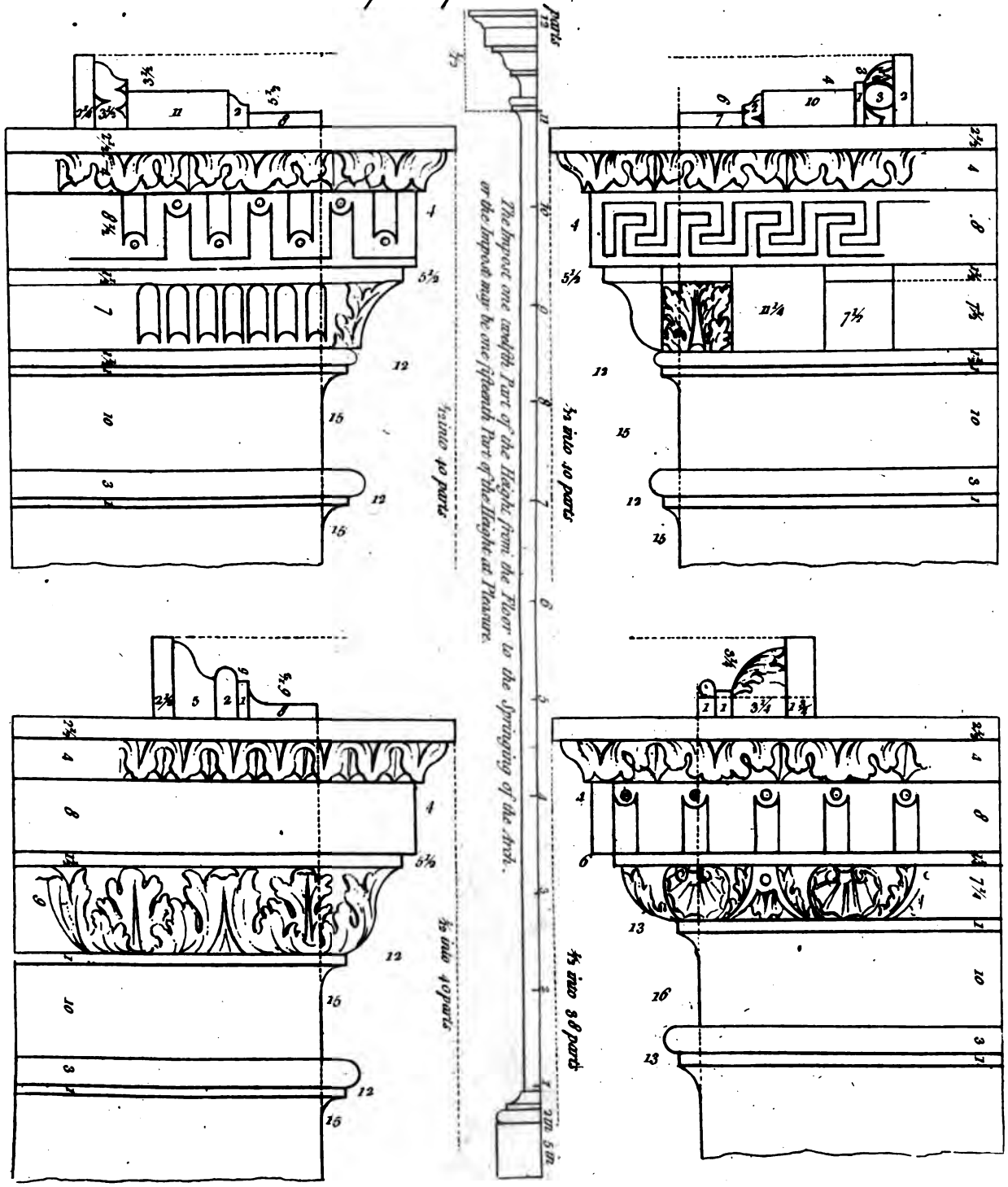
When Columns are fluted divide the Round or Circumference into 96 parts give three to a Flute and one to a Fillet.

Diminish the Staves of the Columns on the Faces before they are Glued together, this is a very safe and sure way for making the Column.

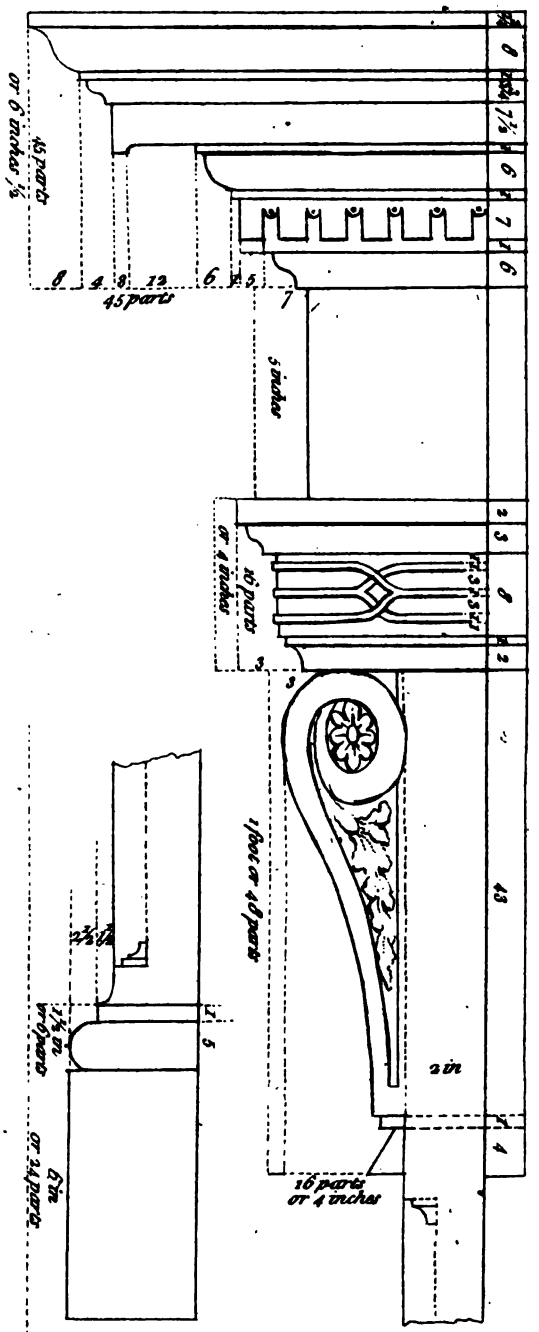


When Pilasters are Fluted divide the Breadth or Diameter into 29 parts give one to a Fillet and three to a Flute.

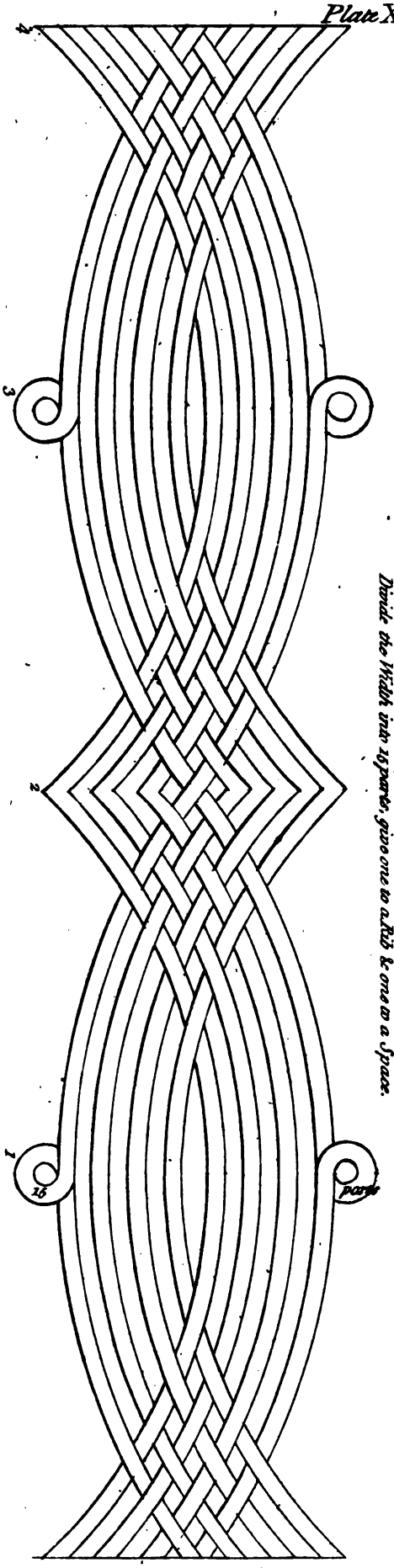
Imposts for Arches &c.


Parts
The Impost one twelfth Part of the Height from the Floor to the Springing of the Arch.
or the Impost may be one fifteenth Part of the Height at Pleasure.
½ into 10 parts
½ into 10 parts
½ into 10 parts
½ into 10 parts

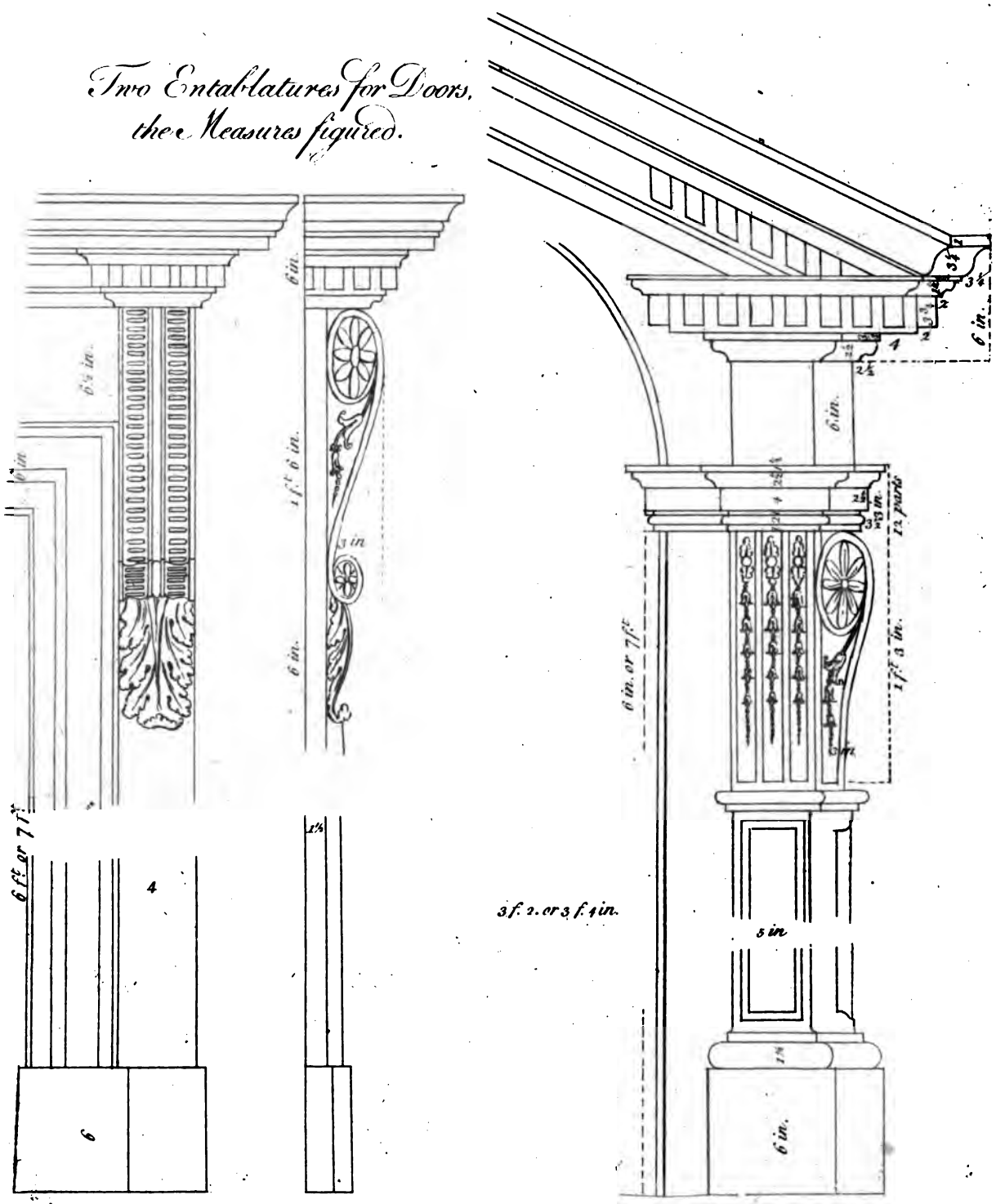
Entablature for Doors Windows &c.
with all the Measures figured for Practice at large.


45 parts or 6 inches
8 4 8 12 6 5 7
45 parts
5 inches
16 parts or 4 inches
1 foot or 48 parts
2 in
16 parts or 4 inches
2 in
16 parts or 4 inches

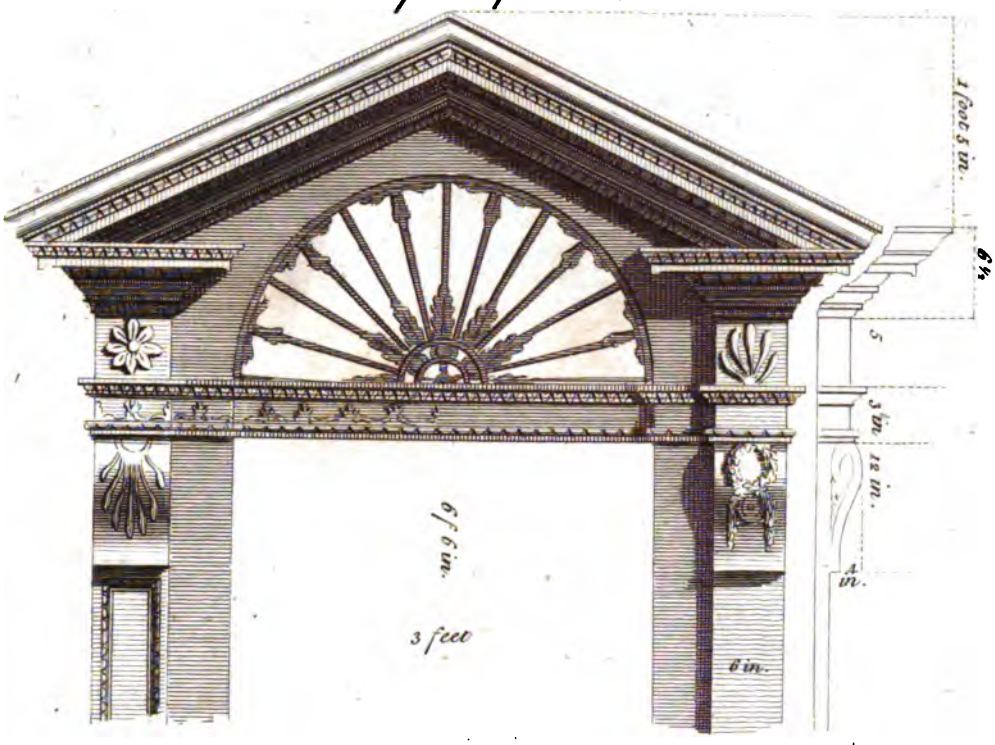
A Guideline for the Raising Planceer of a Pediment &c.
Divide the Width into 15 parts, give one to a Rib & one to a Space.

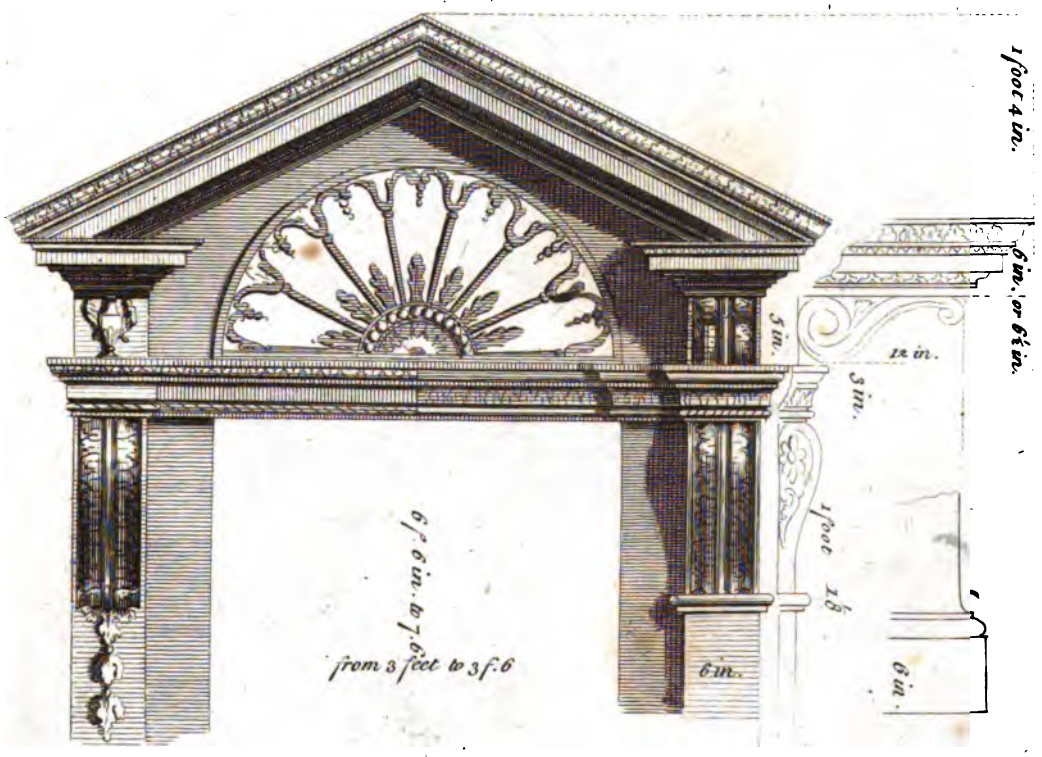


Two Entablatures for Doors, the Measures figured.

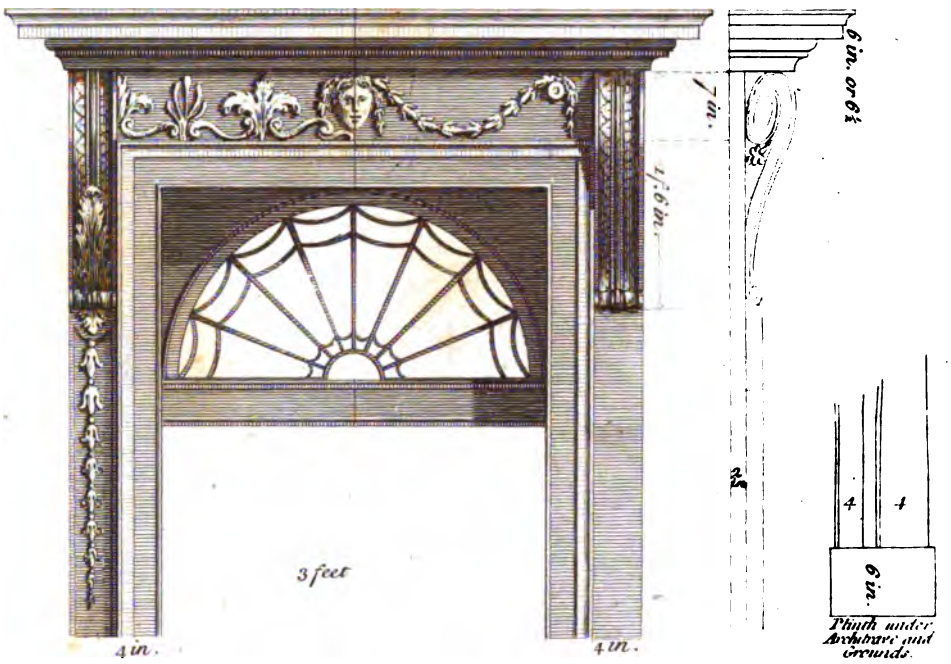


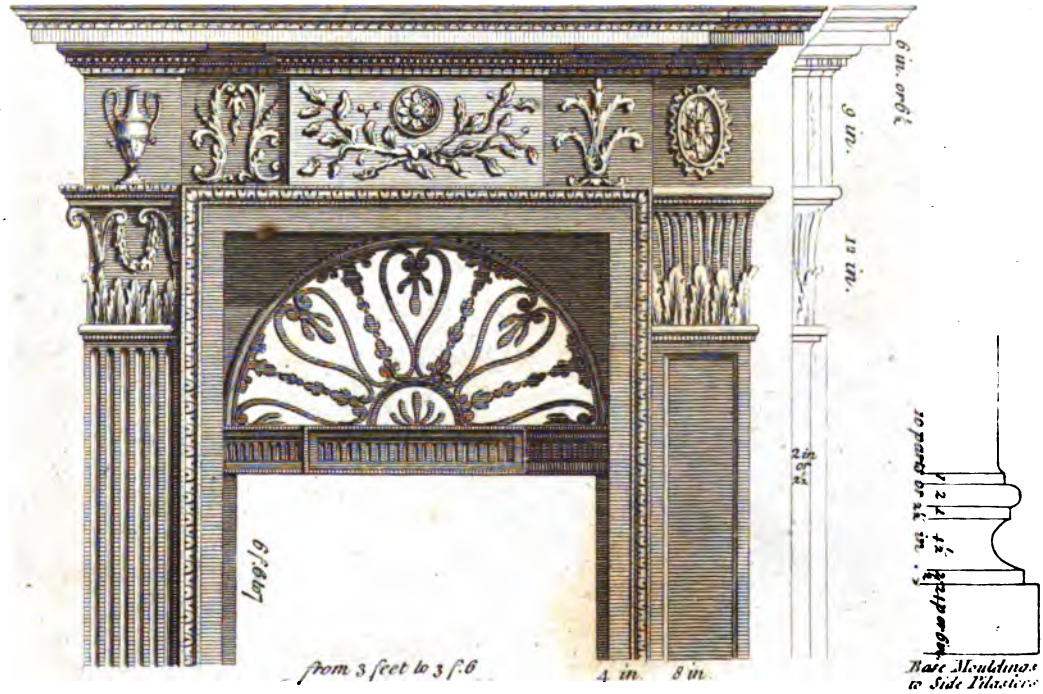
Frontispieces for Doors.





Designs for Door Cases.





Door Cases for Rooms.

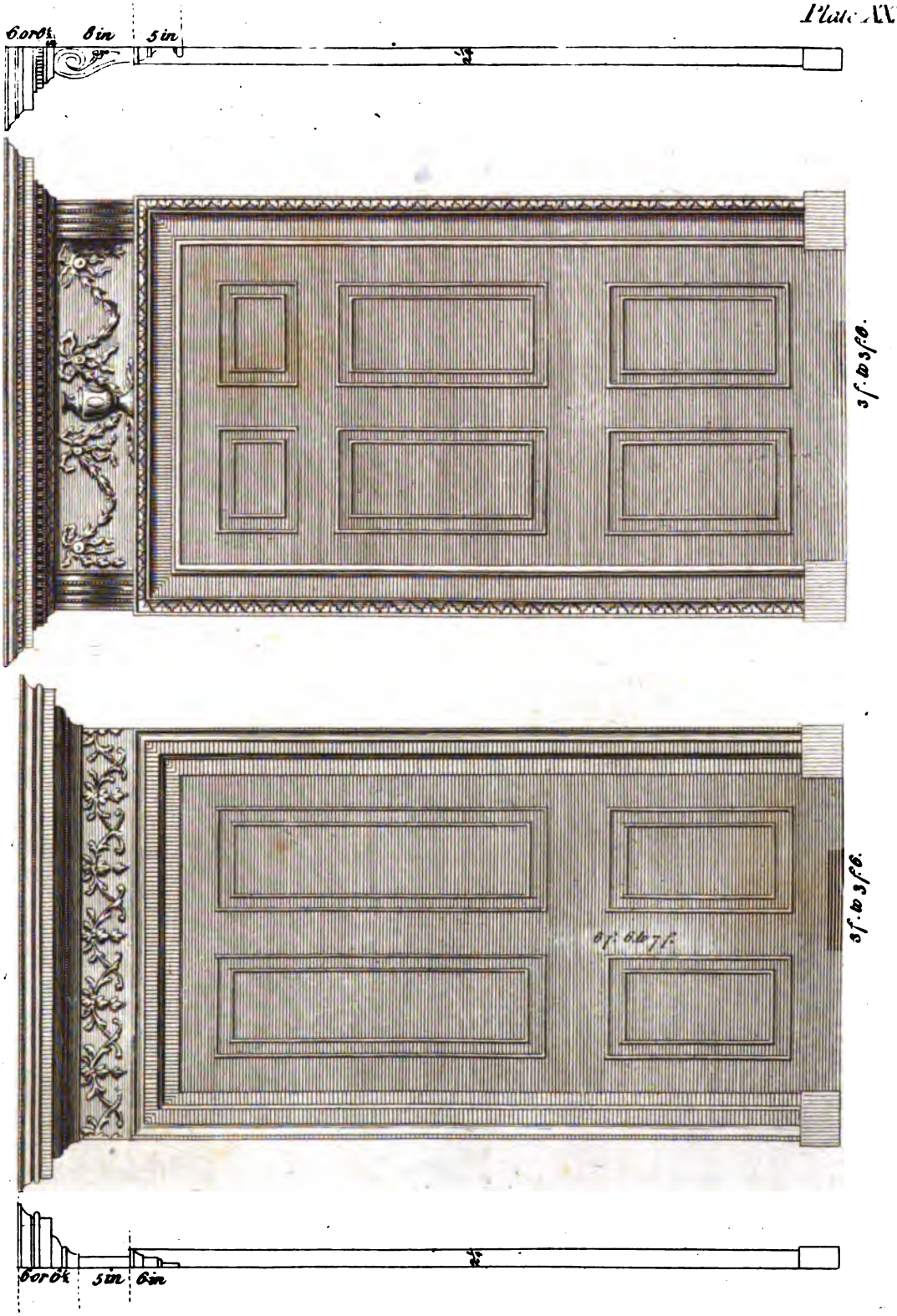
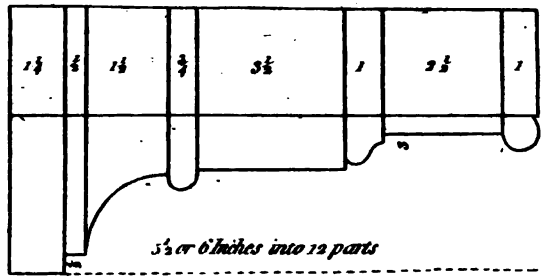
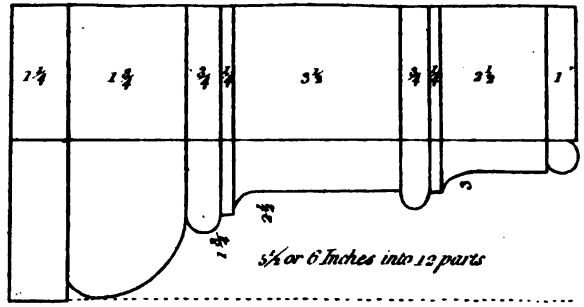


Plate XXVIII

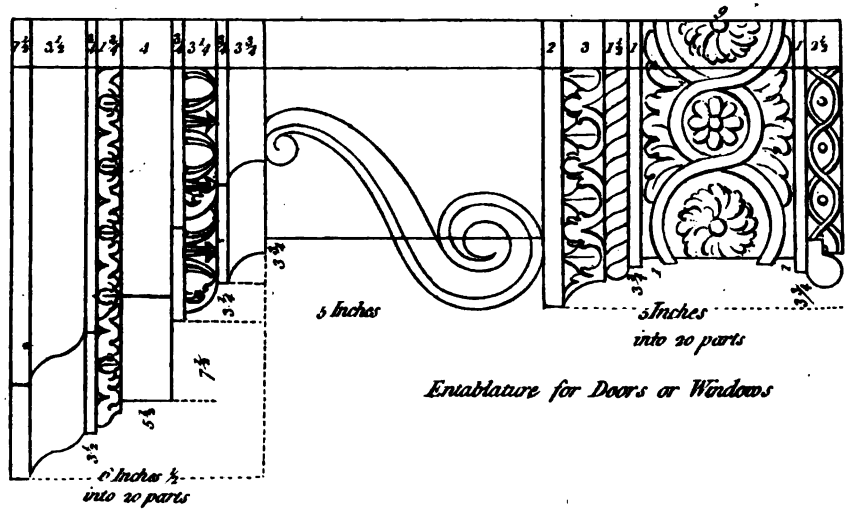
Architrave Mouldings for Doors, Windows &c.



5½ or 6 Inches into 12 parts



5¼ or 6 Inches into 12 parts

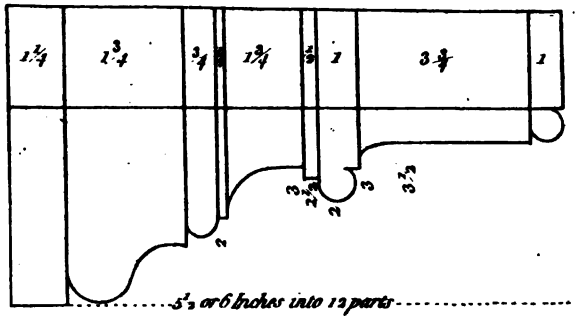


5 Inches

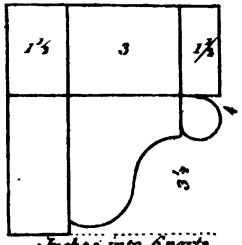
5 Inches into 20 parts

Entablature for Doors or Windows

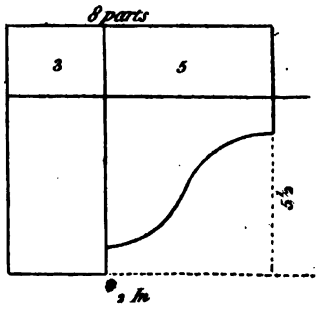
6 Inches ½ into 20 parts



5½ or 6 Inches into 12 parts

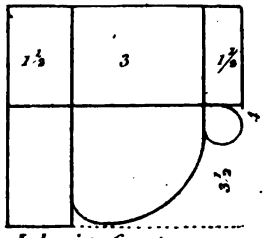


2 Inches into 6 parts or 2¼ Ditto

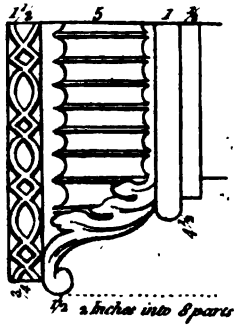


8 parts

2 In

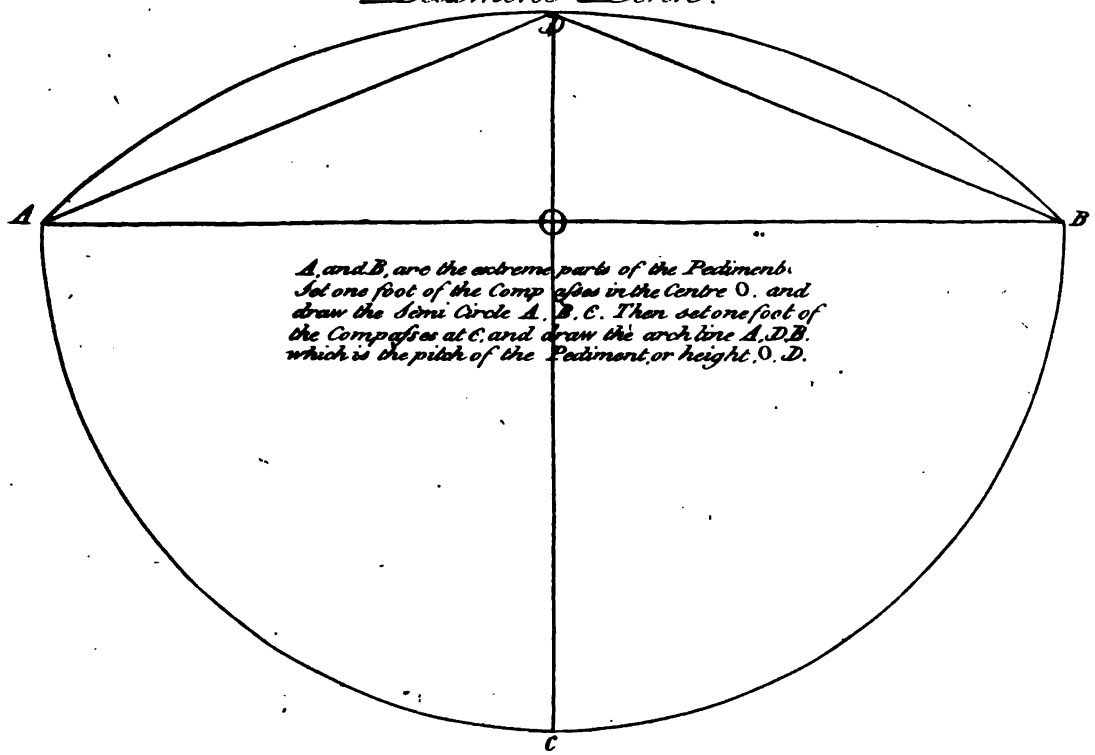


2 Inches into 6 parts or 2¼ Ditto



2 Inches into 8 parts

Pediment Pitch.



A, and B, are the extreme parts of the Pediment.
Set one foot of the Compasses in the Centre O. and
draw the Semi Circle A. D. B. C. Then set one foot of
the Compasses at C. and draw the arch line A. D. B.
which is the pitch of the Pediment, or height, O. D.

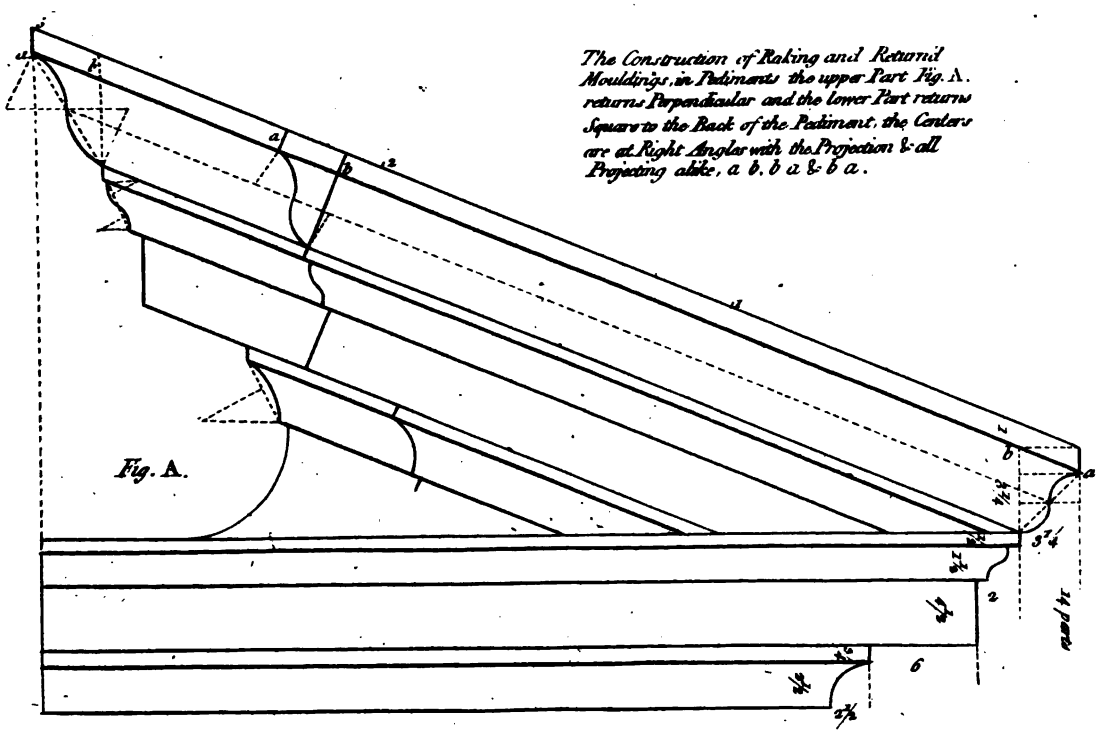
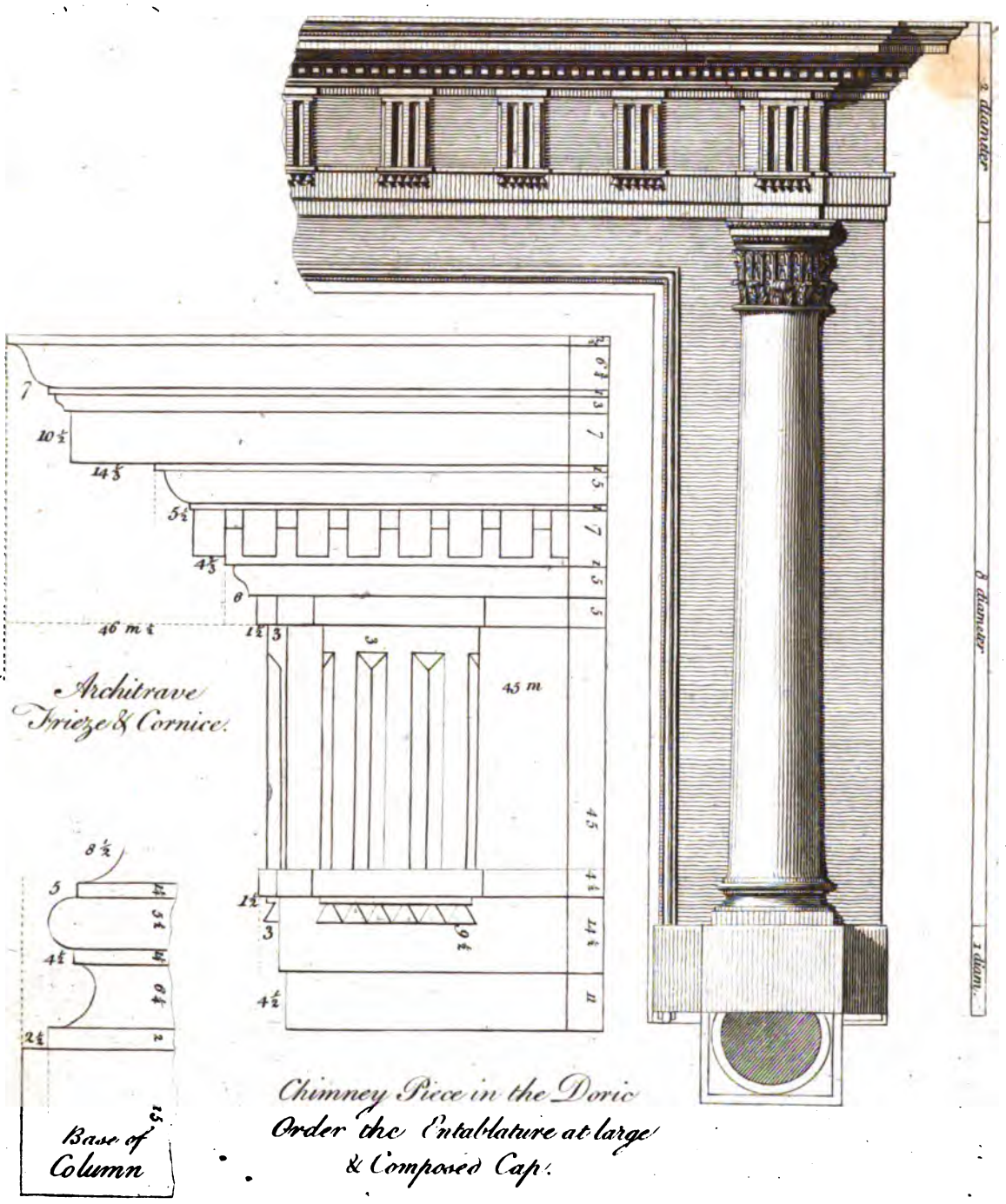
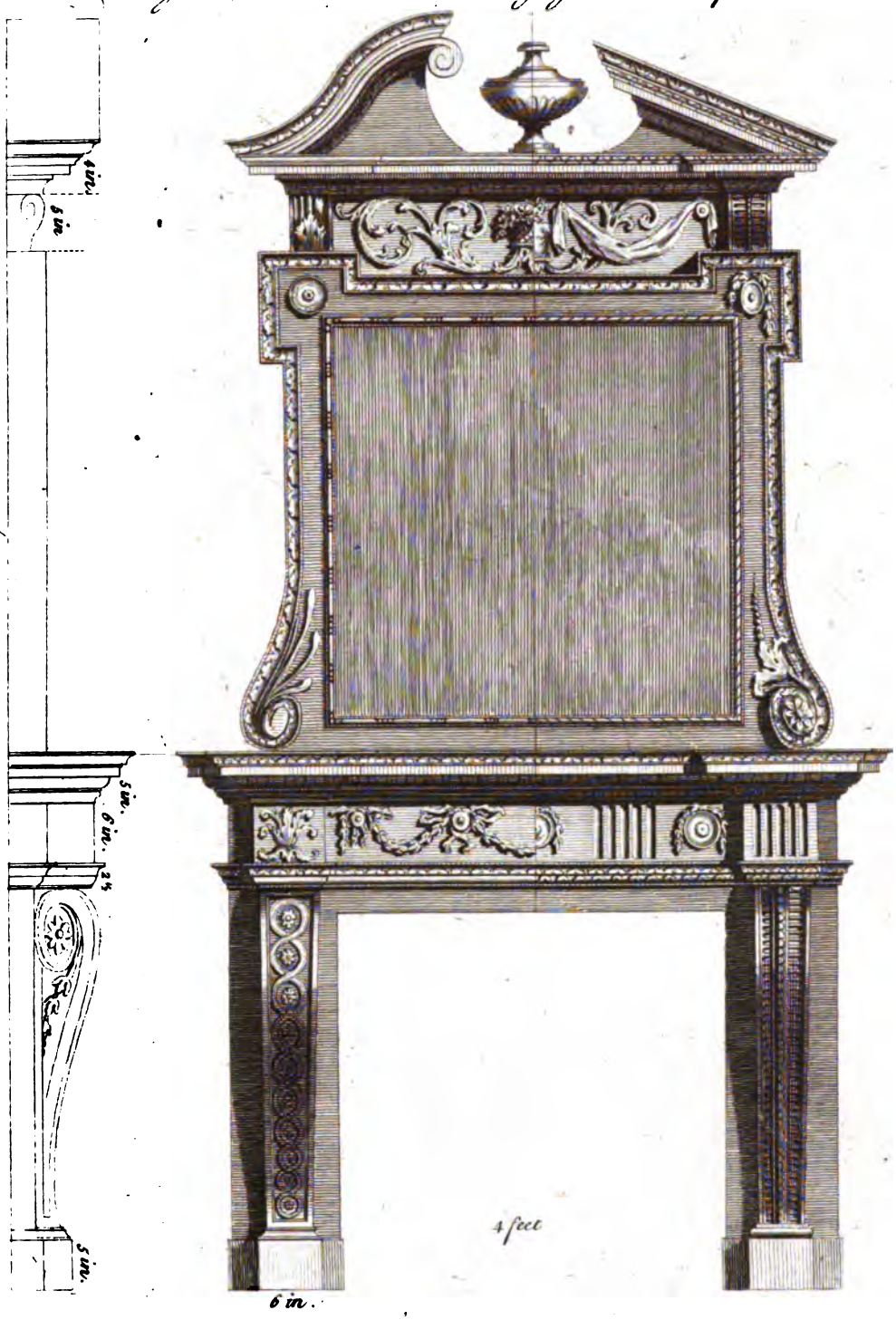


Fig. A.

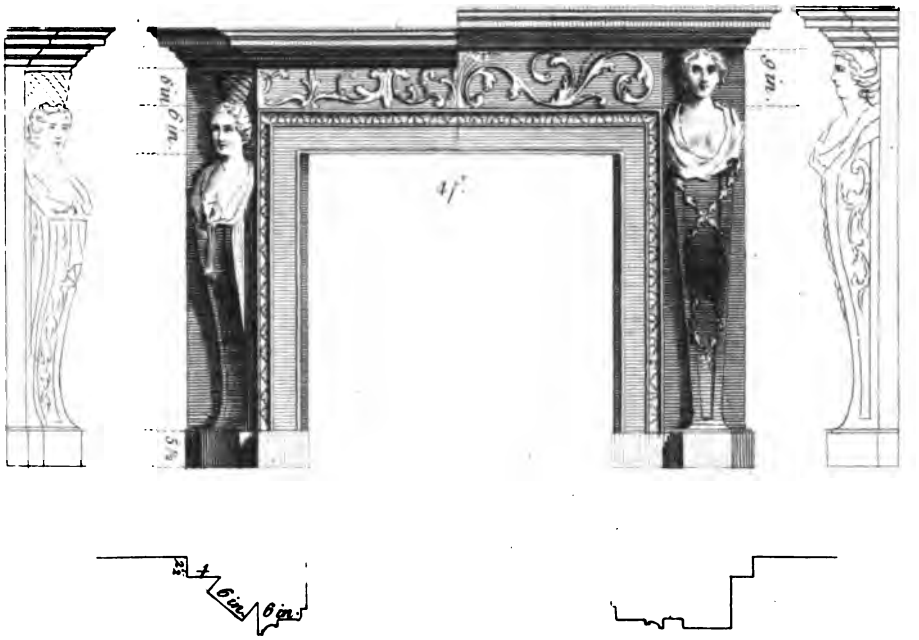
The Construction of Raking and Returnd Mouldings, in Pediments the upper Part Fig. A. returns Perpendicular and the lower Part returns Square to the Back of the Pediment, the Centers are at Right Angles with the Projection & all Projecting alike, a b. b a & b a.


2 diameter
8 diameter
1 diam.
46 m
45 m
Architrave
Frieze & Cornice
Base of
Column
Chimney Piece in the Doric
Order the Entablature at large
& Composed Cap.

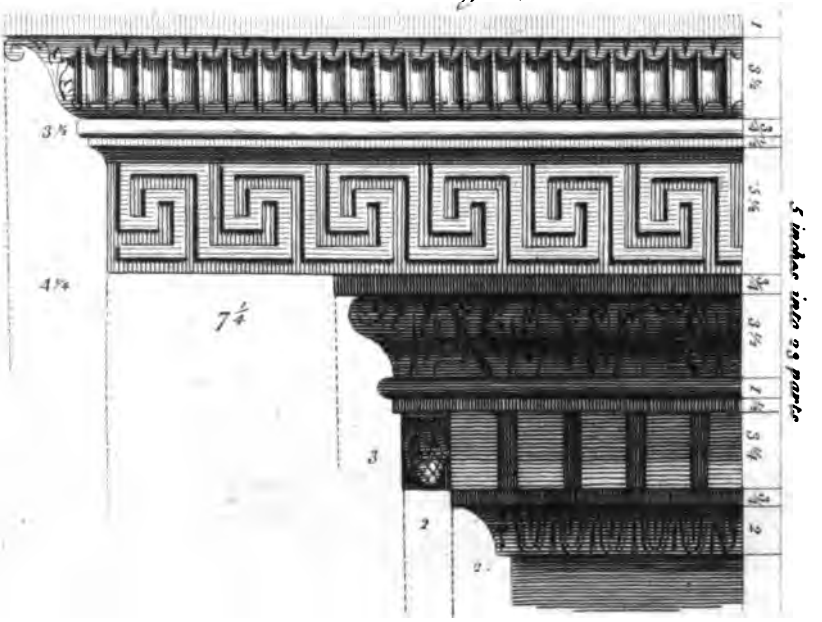
Two Chimney Pieces with open Pediment, Glass or Picture-frames ornamented.

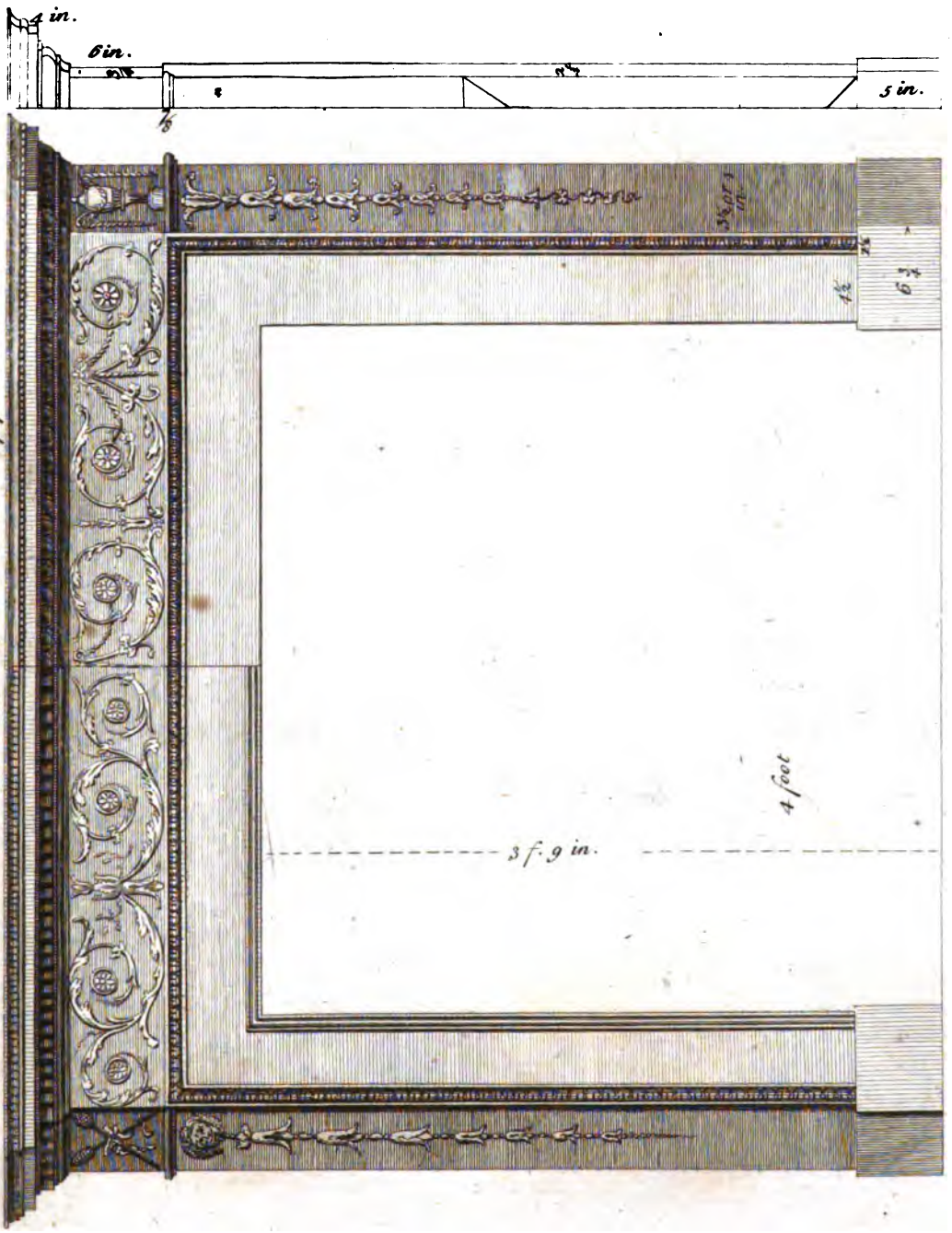


Two Designs for Chimneys with Caryattic Figures.



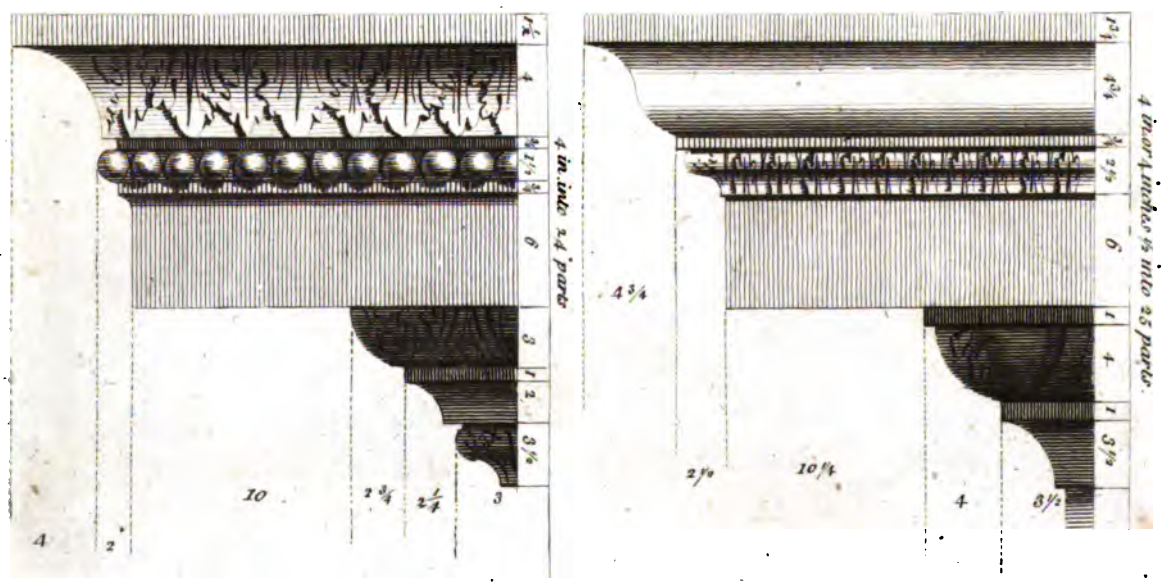
Cornice at large.

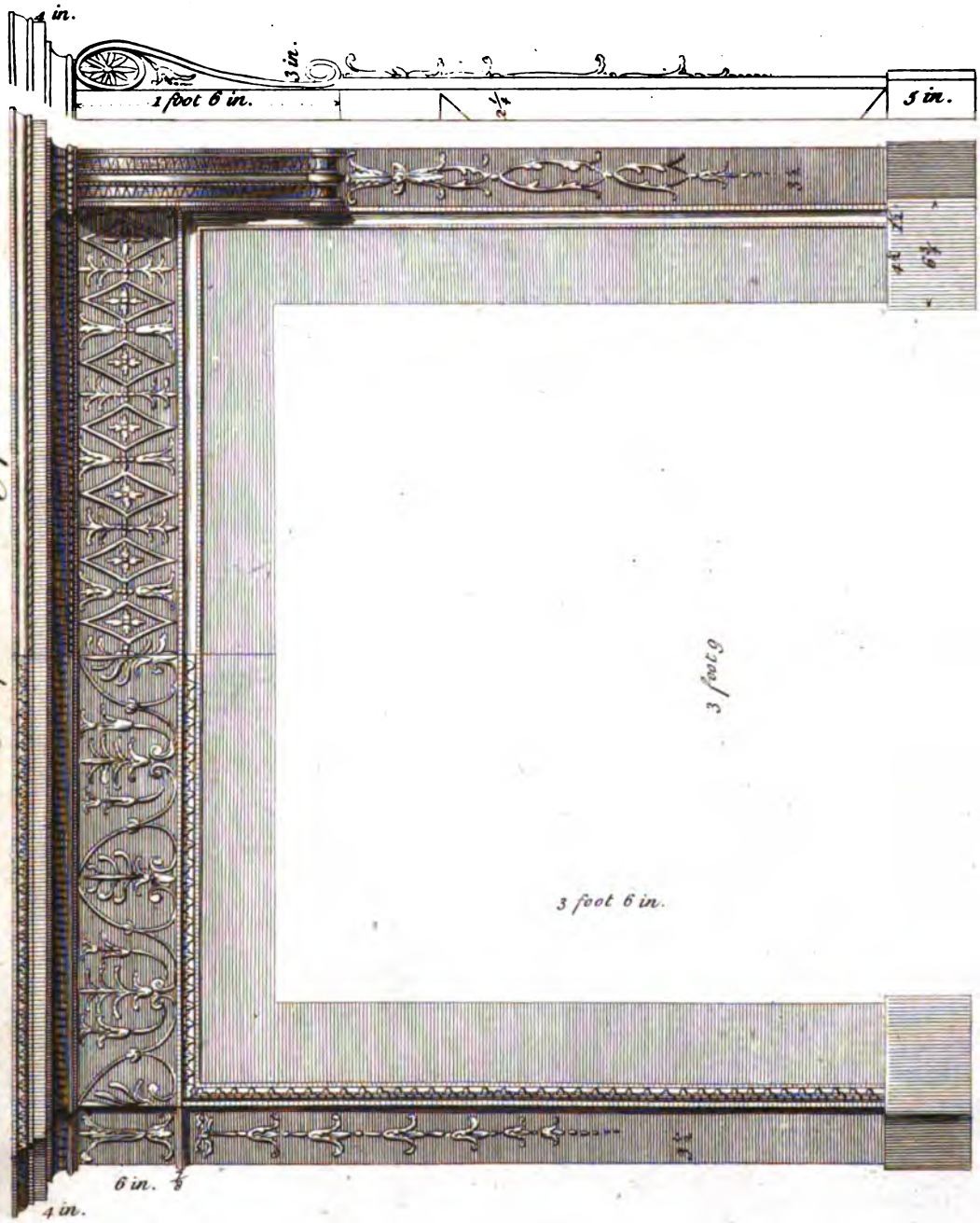




Two Designs for Chimney Pieces.

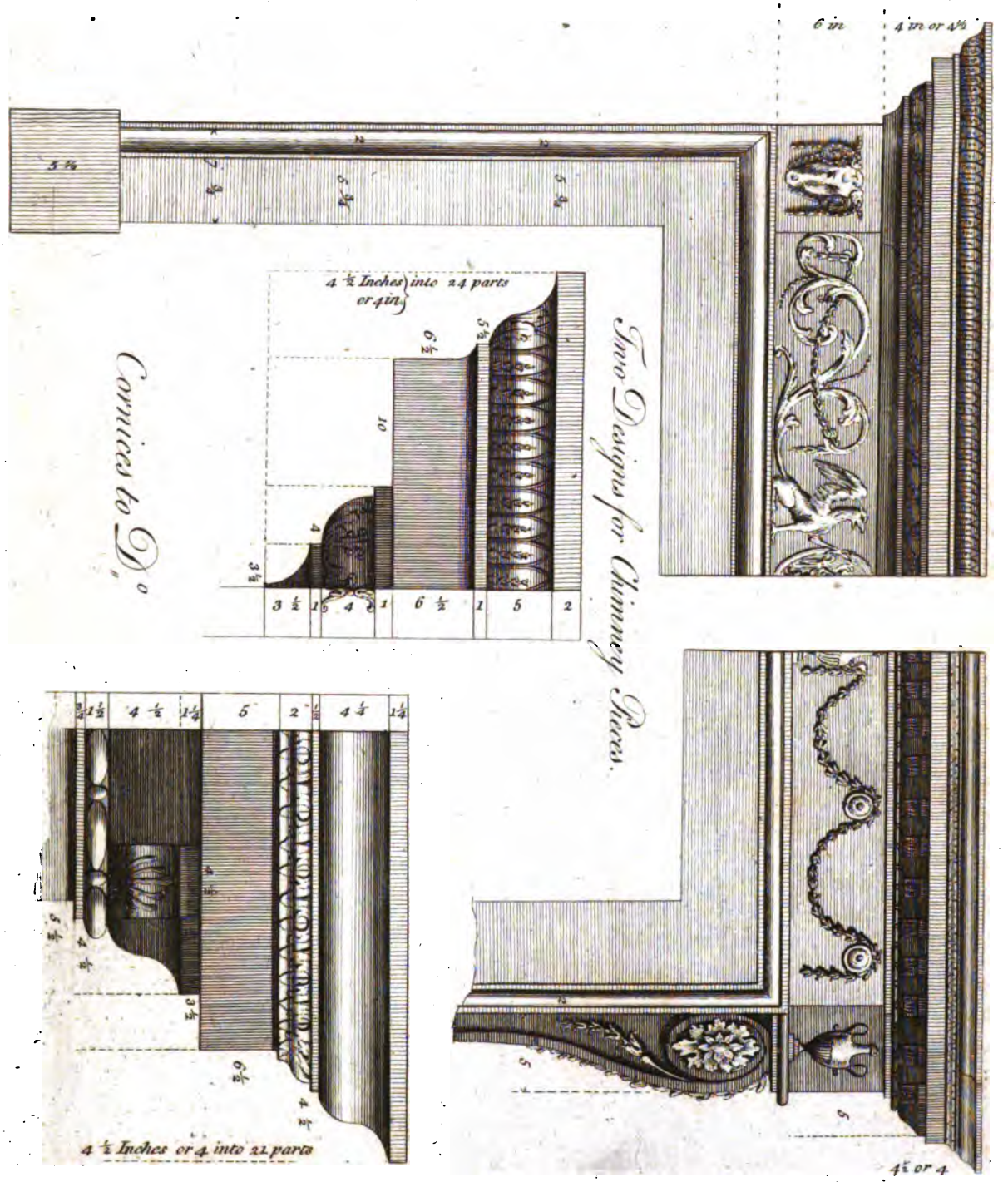
Two Designs for Chimneys,
with their Mouldings at large.

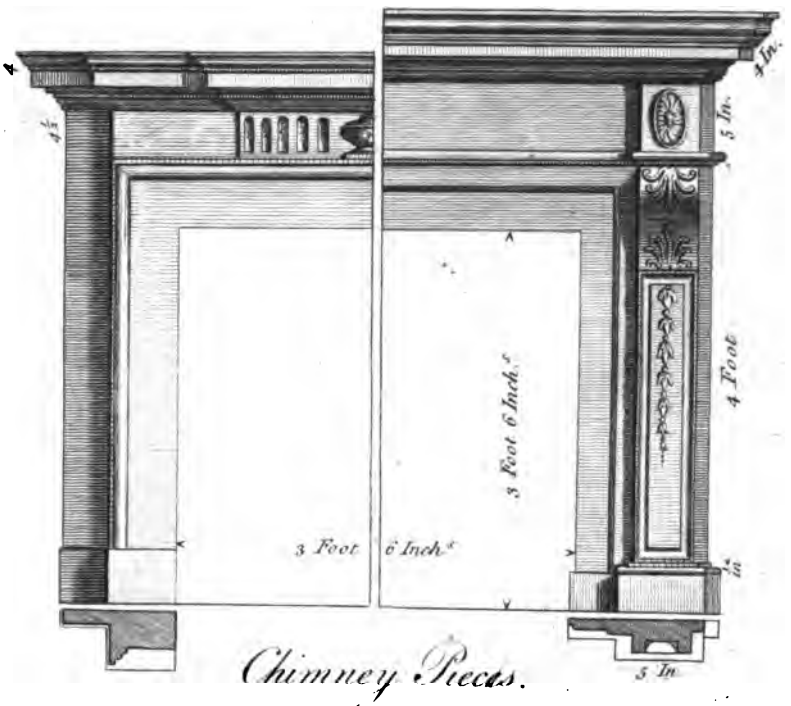




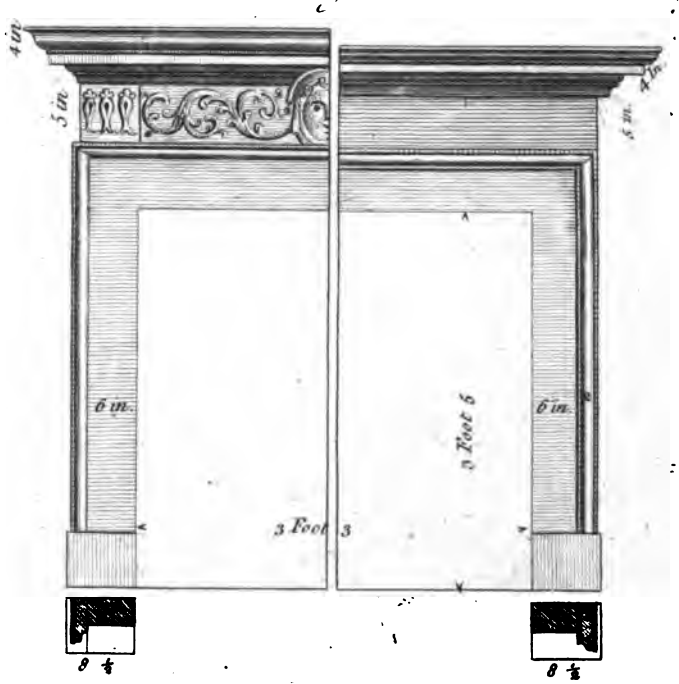
Two Designs for Chimney-Pieces.

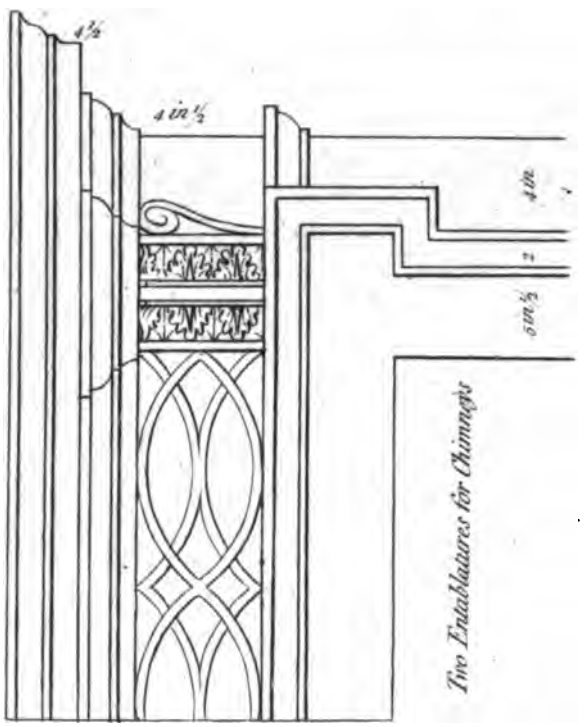
Two Designs for Chimney Pieces.



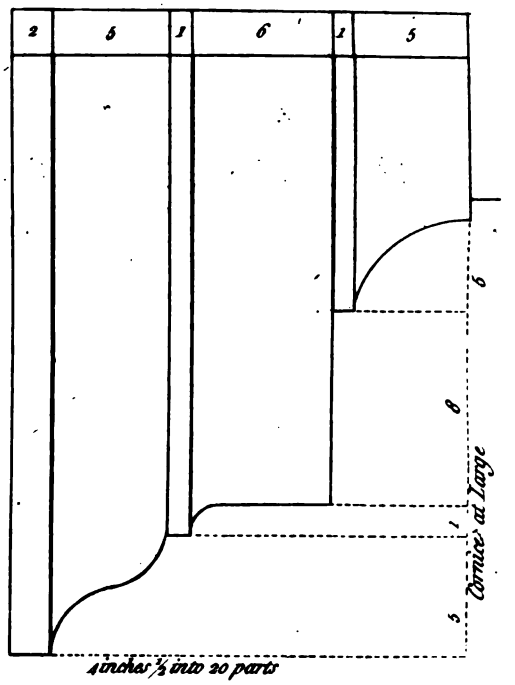


Chimney Pieces.



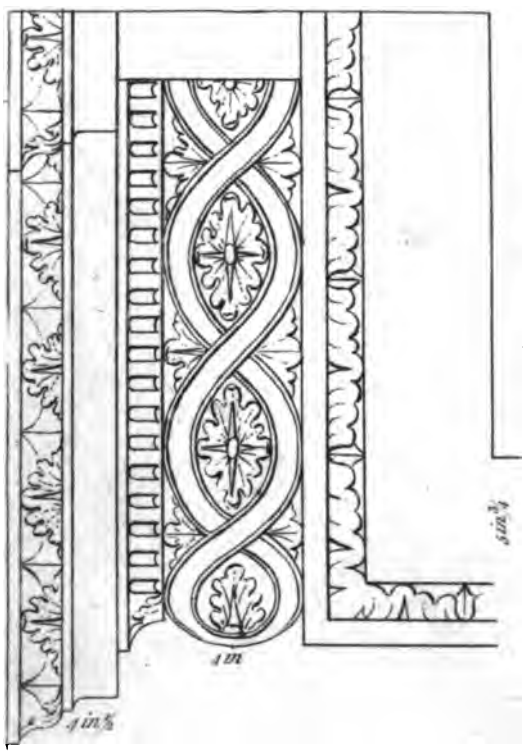


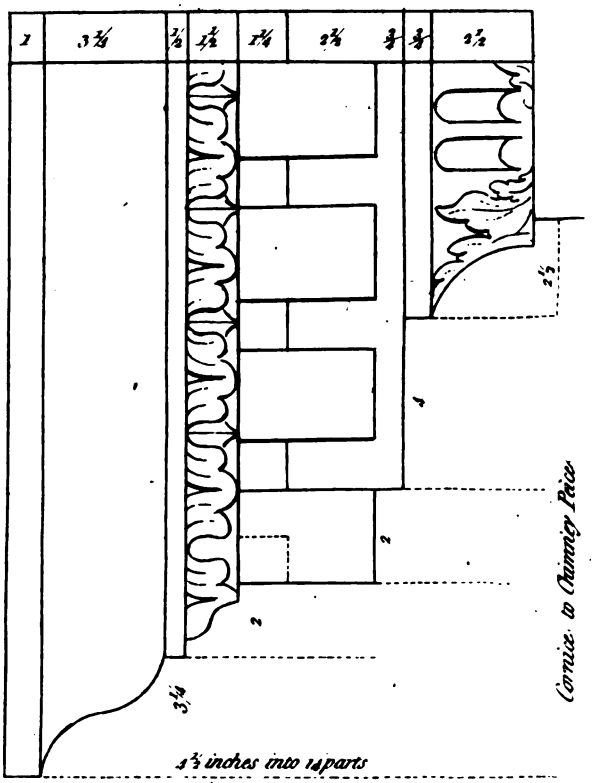
Five Entablatures for Chimneys



Cornice at Large

4 inches ½ into 20 parts

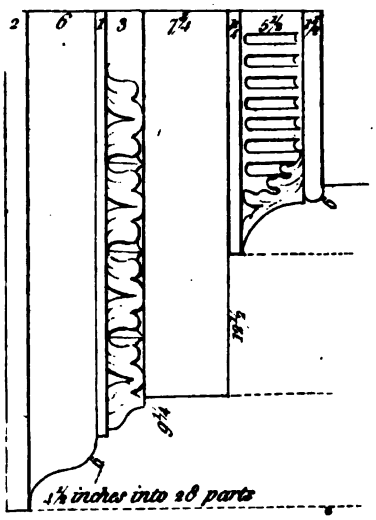


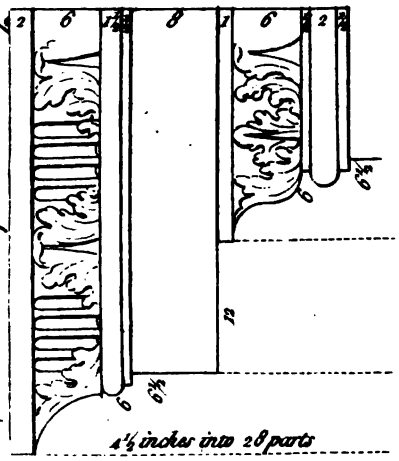


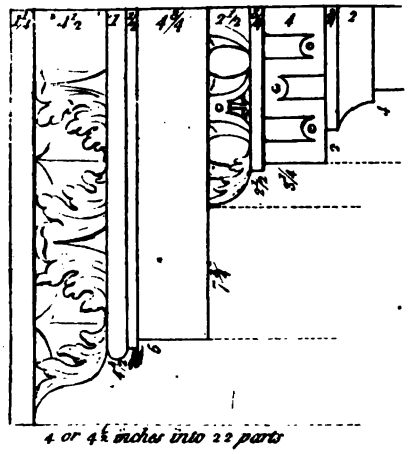
Cornice to Chimney Piece

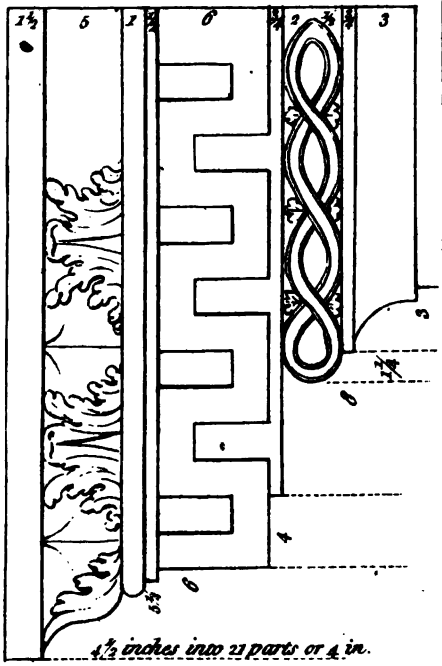
4⅓ inches into 14 parts

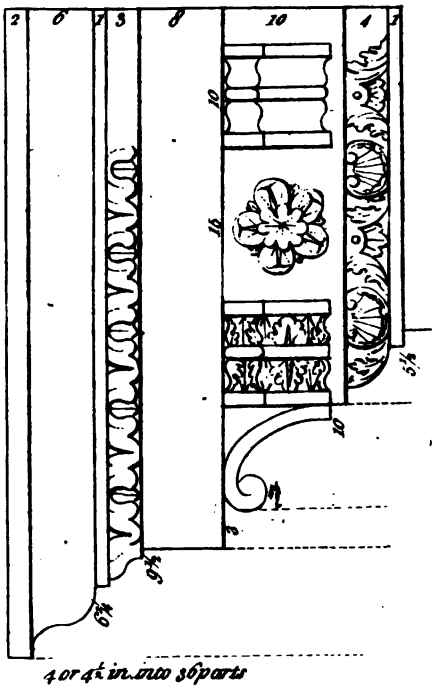
Cornices, Architraves for Chimneys &c.

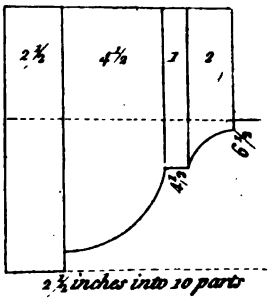


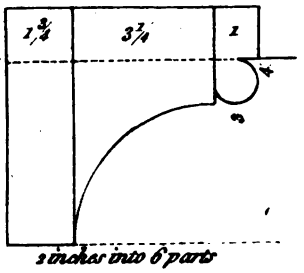


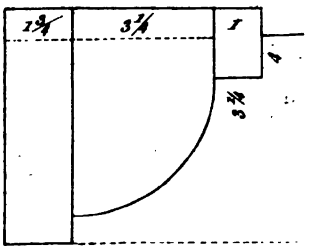


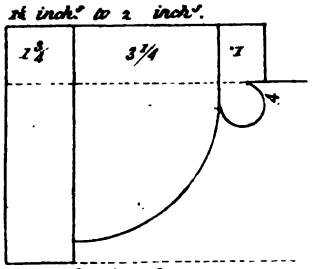


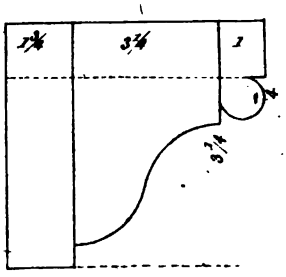




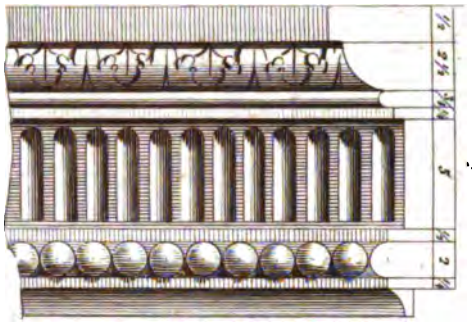


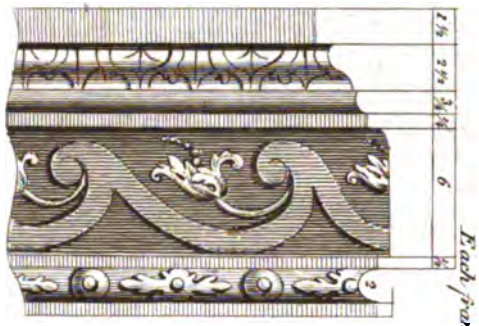




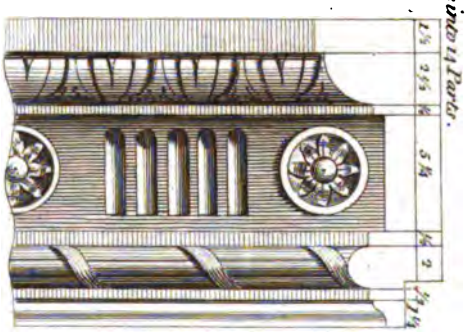


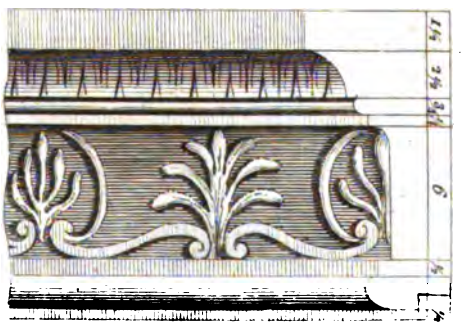
Mouldings for Looking Glass or Picture Frames.

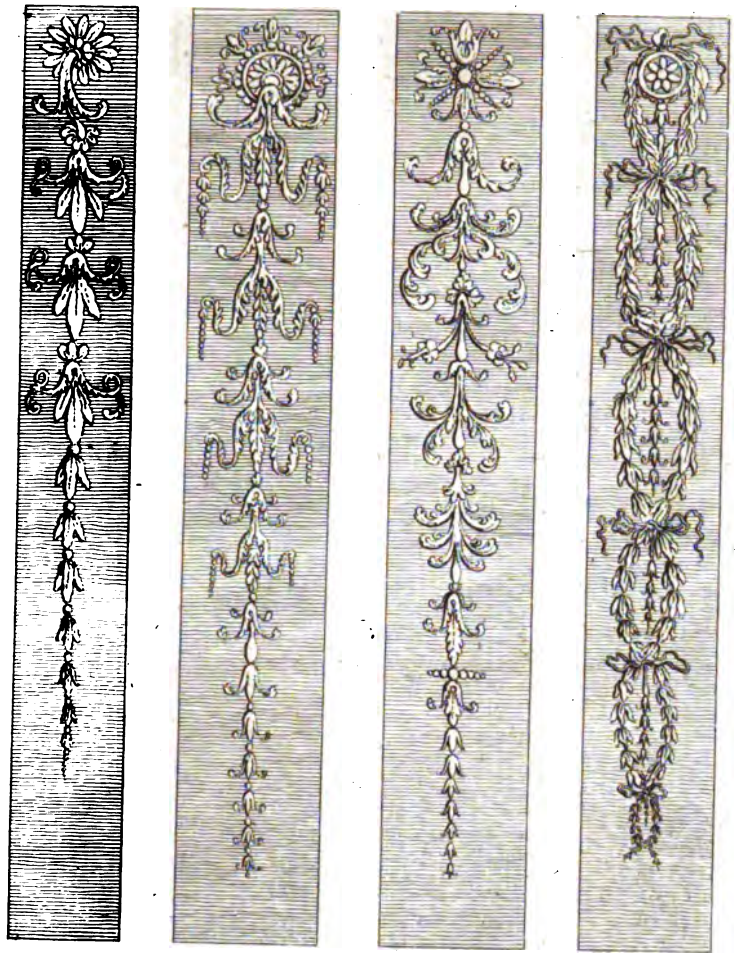




Each Frame into 14 Parts.







Ornaments for Friezes & Pilasters &c.

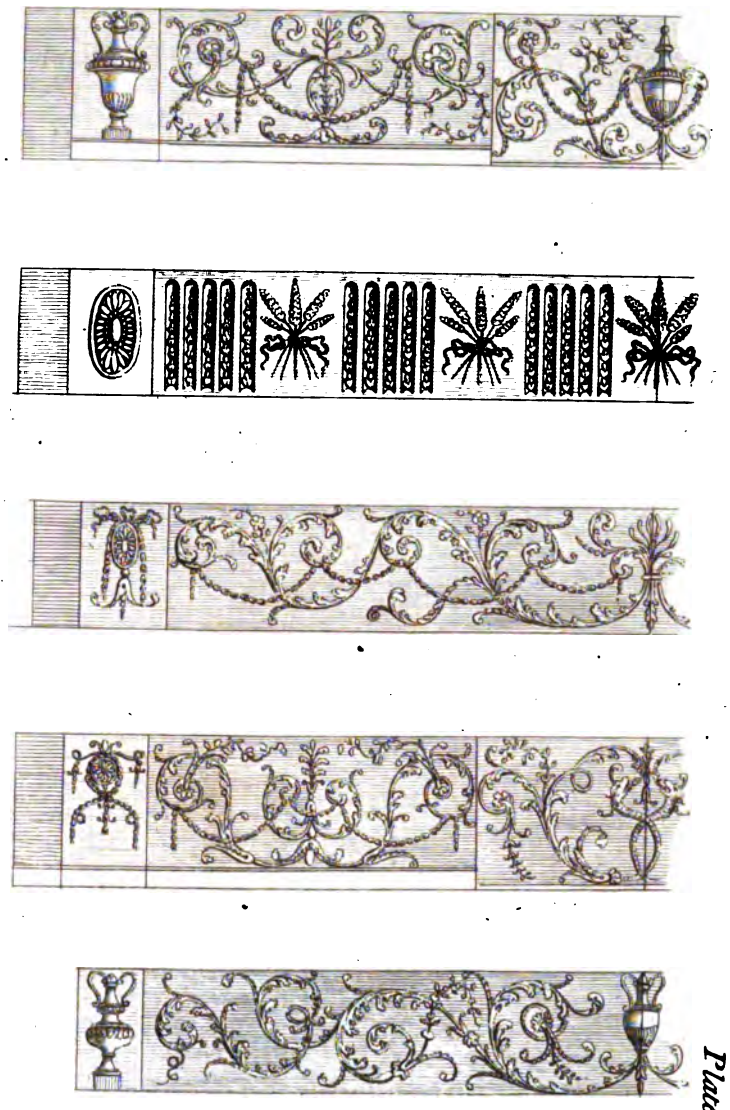
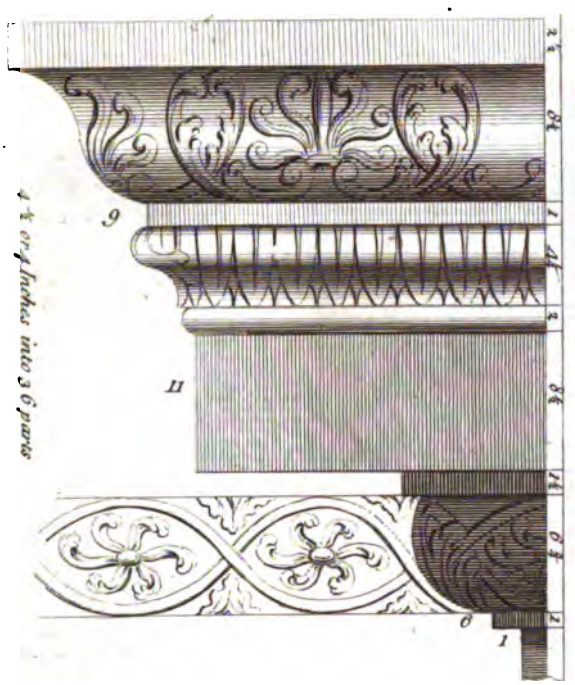
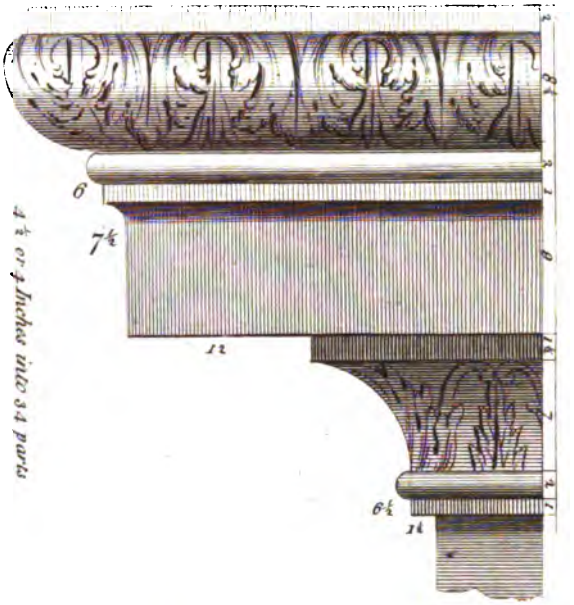
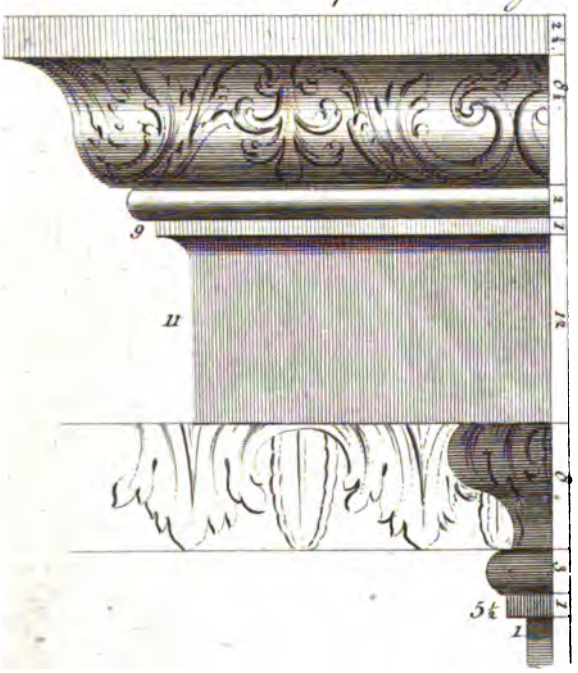


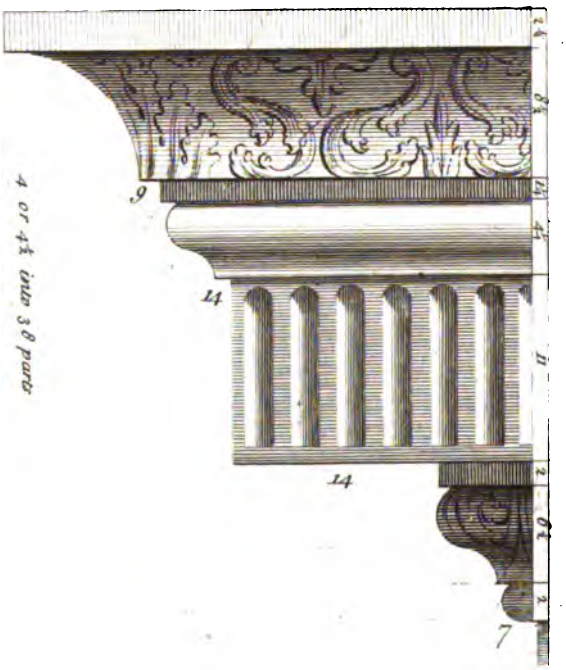
Plate I.





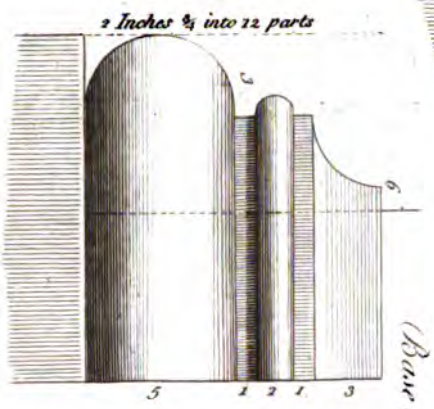
Cornices for Chimney Caps Doors or Windows &c.



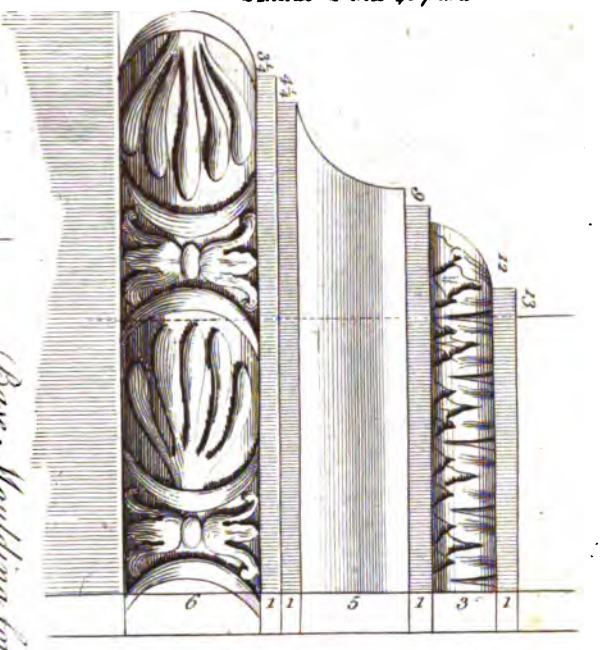


Base Mouldings for the Dado part of Rooms.

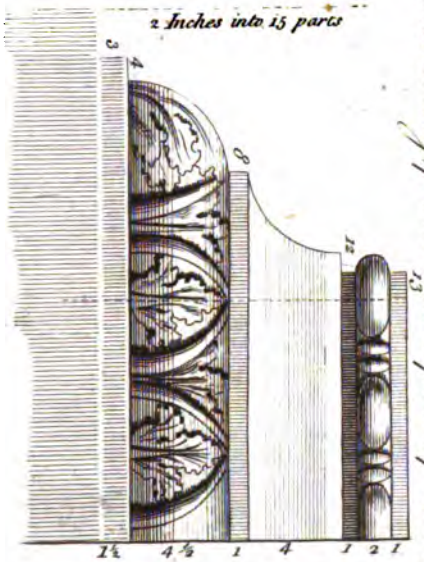
2 Inches 3/4 into 12 parts



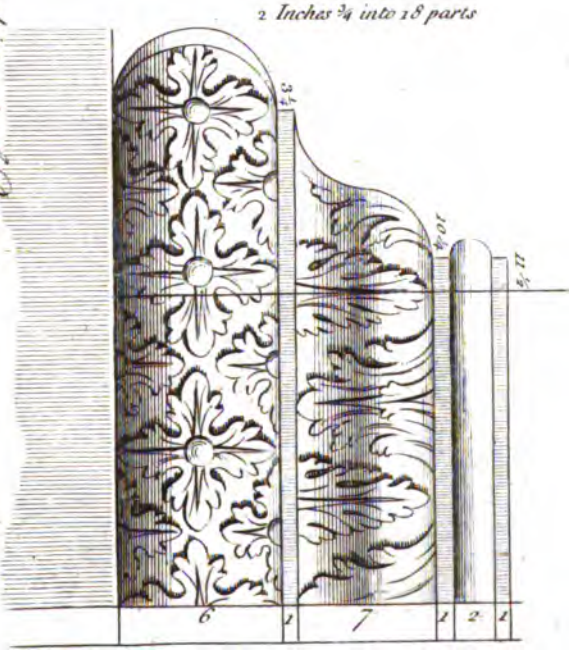
2 Inches 1/2 into 18 parts



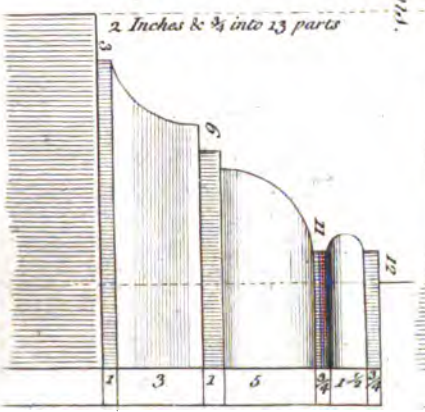
2 Inches into 15 parts



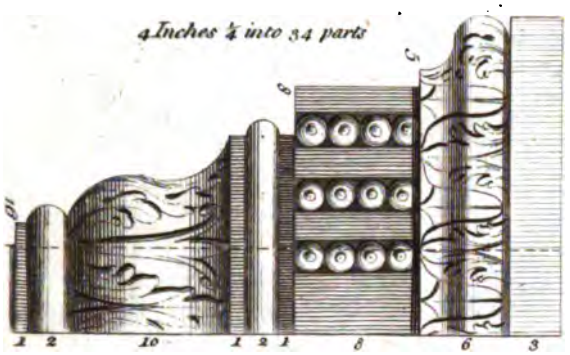
2 Inches 3/4 into 18 parts



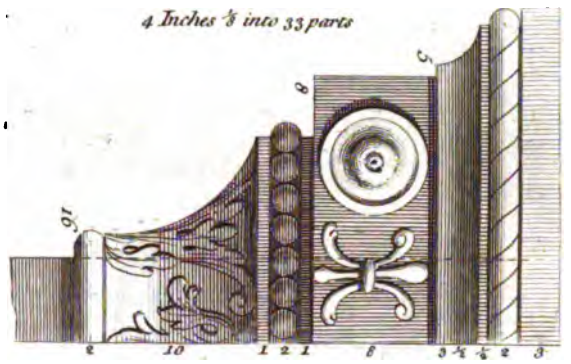
2 Inches & 3/4 into 13 parts



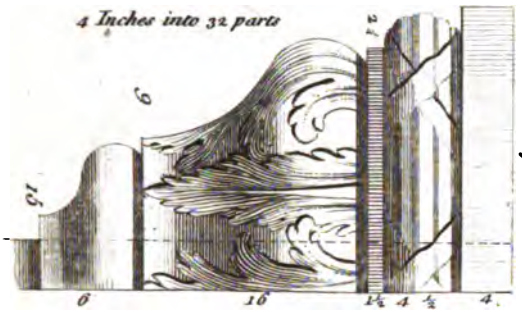
4 Inches ¼ into 34 parts



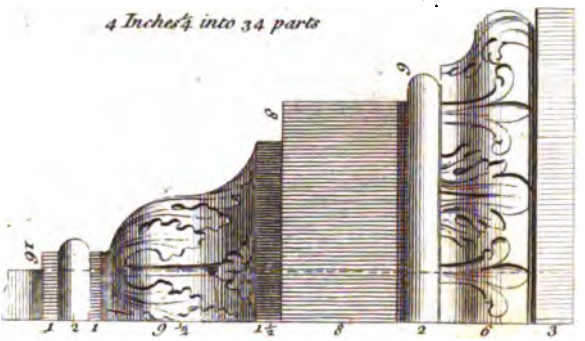
4 Inches ⅛ into 33 parts



4 Inches into 32 parts

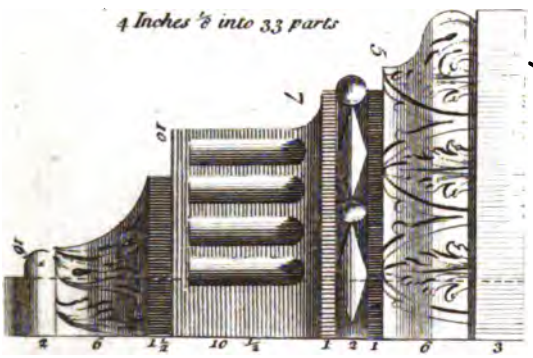


4 Inches ¼ into 34 parts

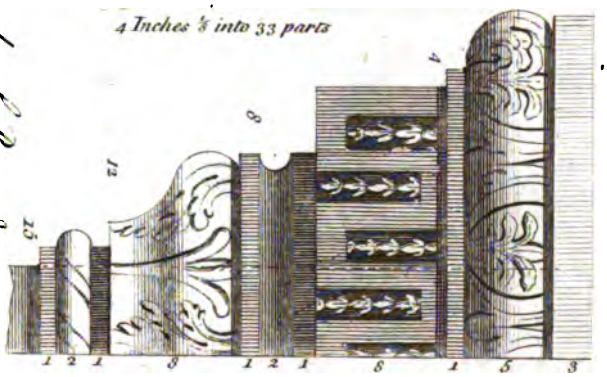


Subjects for the Heads of Rooms &c.

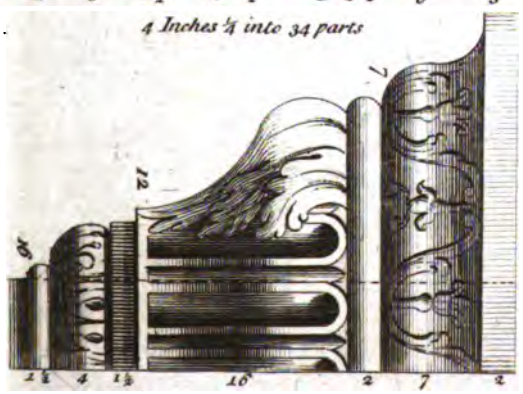
4 Inches ⅛ into 33 parts



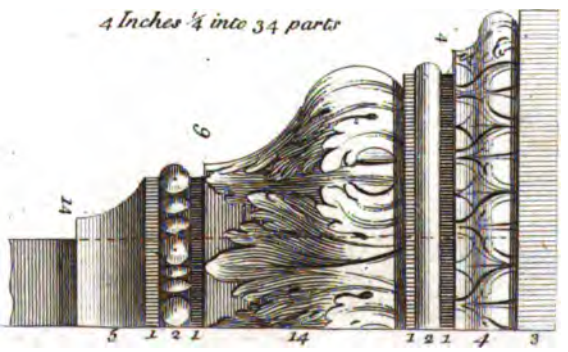
4 Inches ⅛ into 33 parts



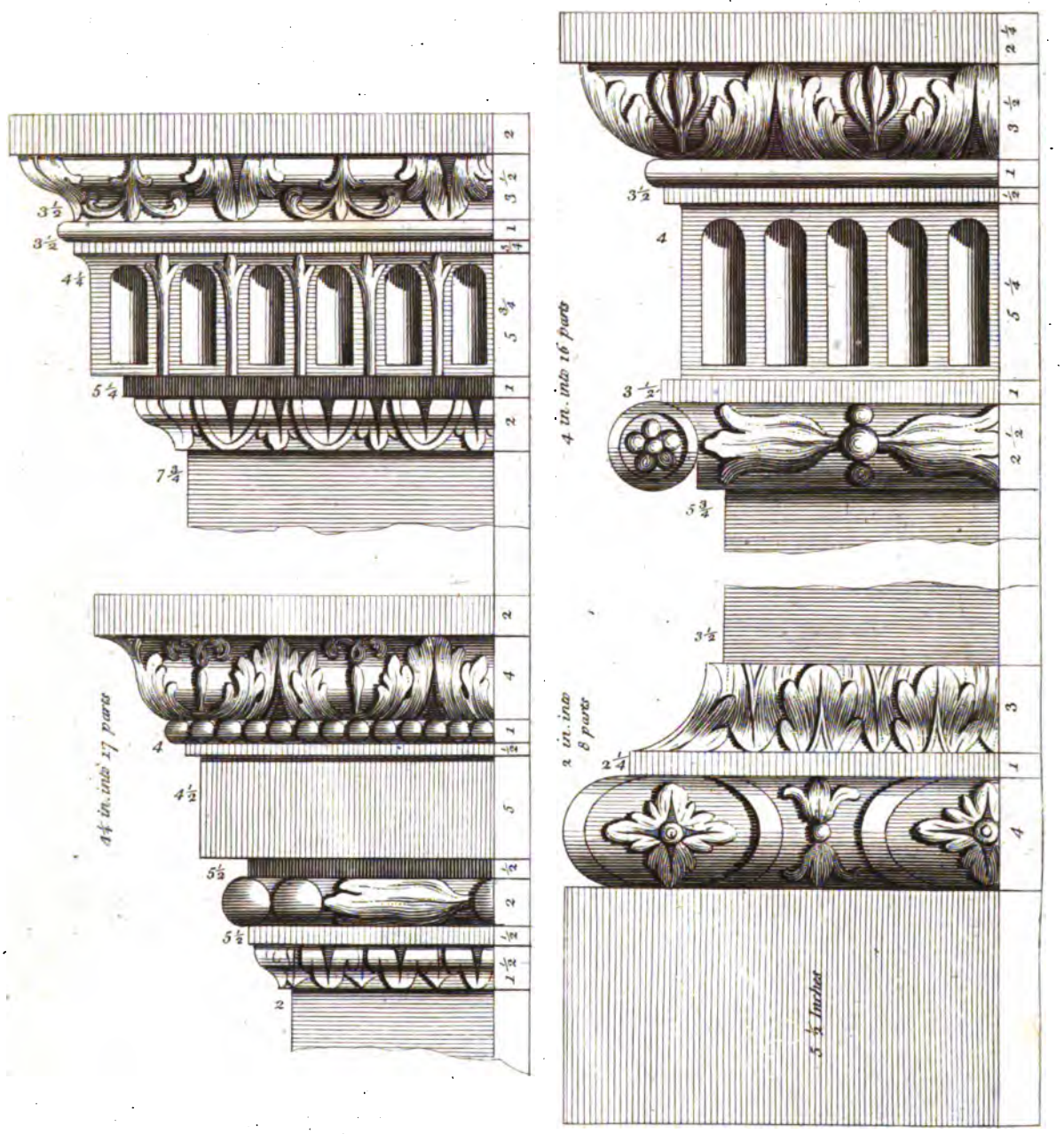
4 Inches ¼ into 34 parts

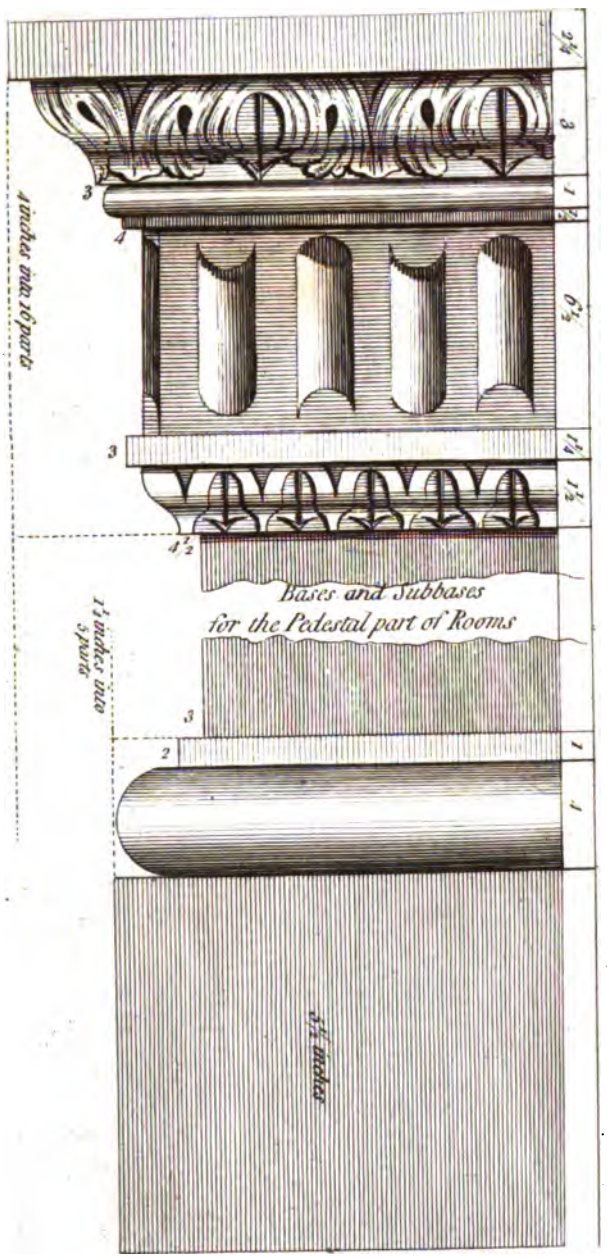


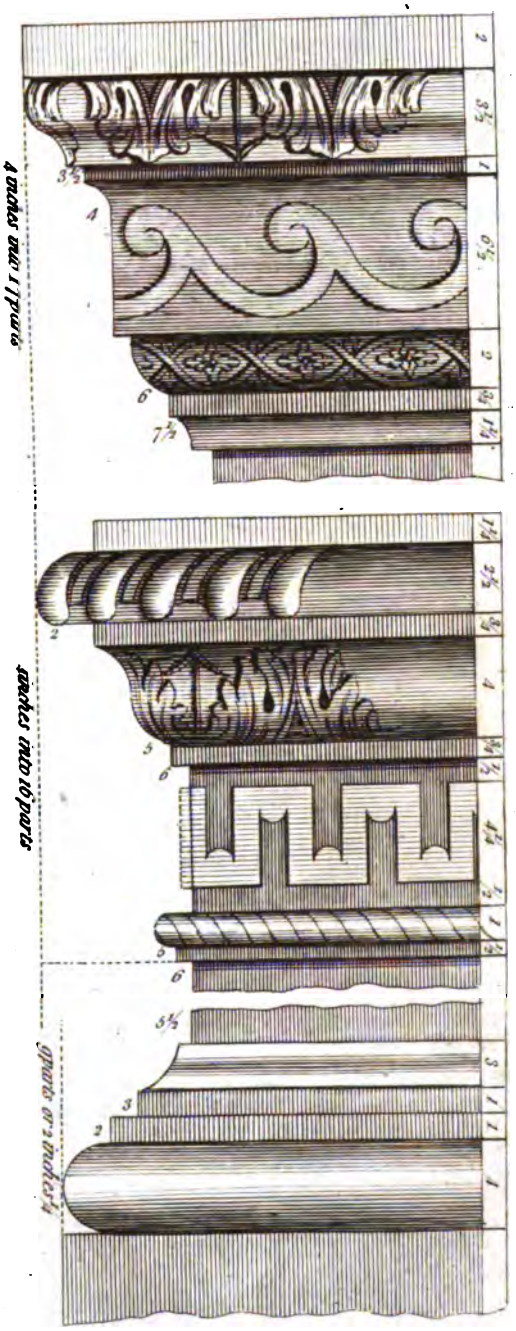
4 Inches ¼ into 34 parts



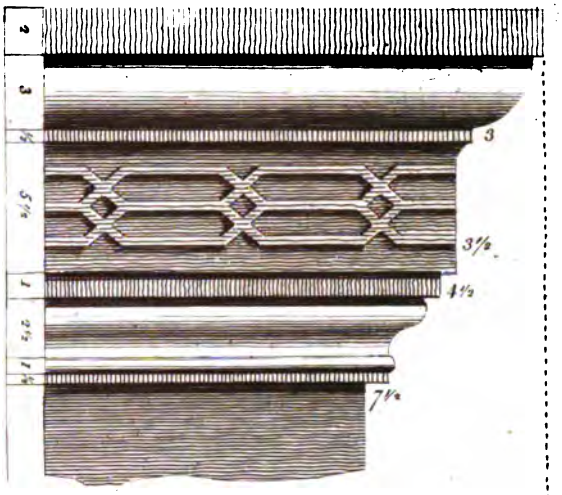
Base & Sub-base for Rooms.



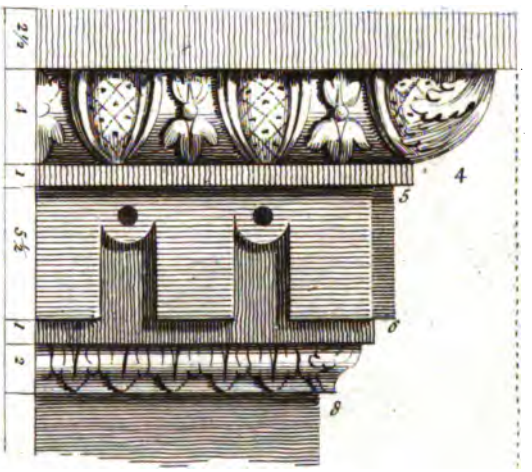

4 inches into 10 parts
Bases and Subbases
for the Pedestal part of Rooms
1¼ inches into 5 parts
5½ inches

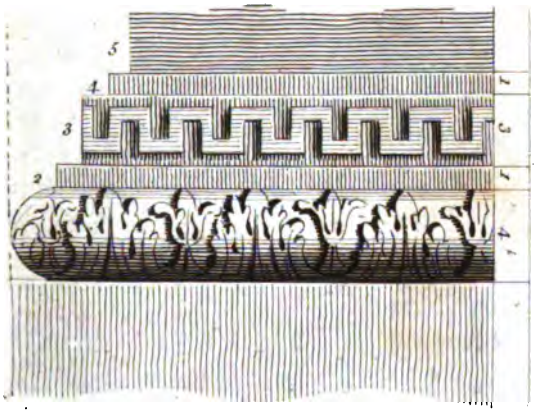

4 inches into 10 parts
3 inches into 10 parts
5½ inches into 10 parts

Bases & Sub-bases for Rooms.



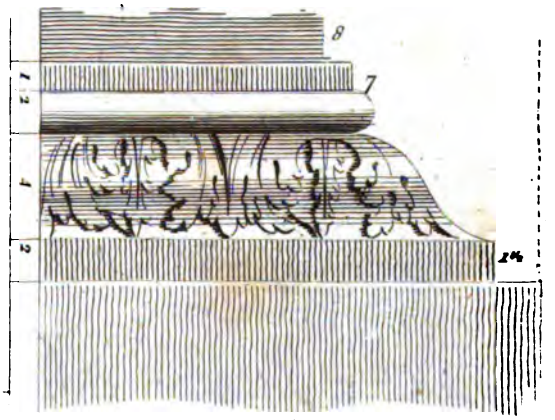
4 inches into 16 parts

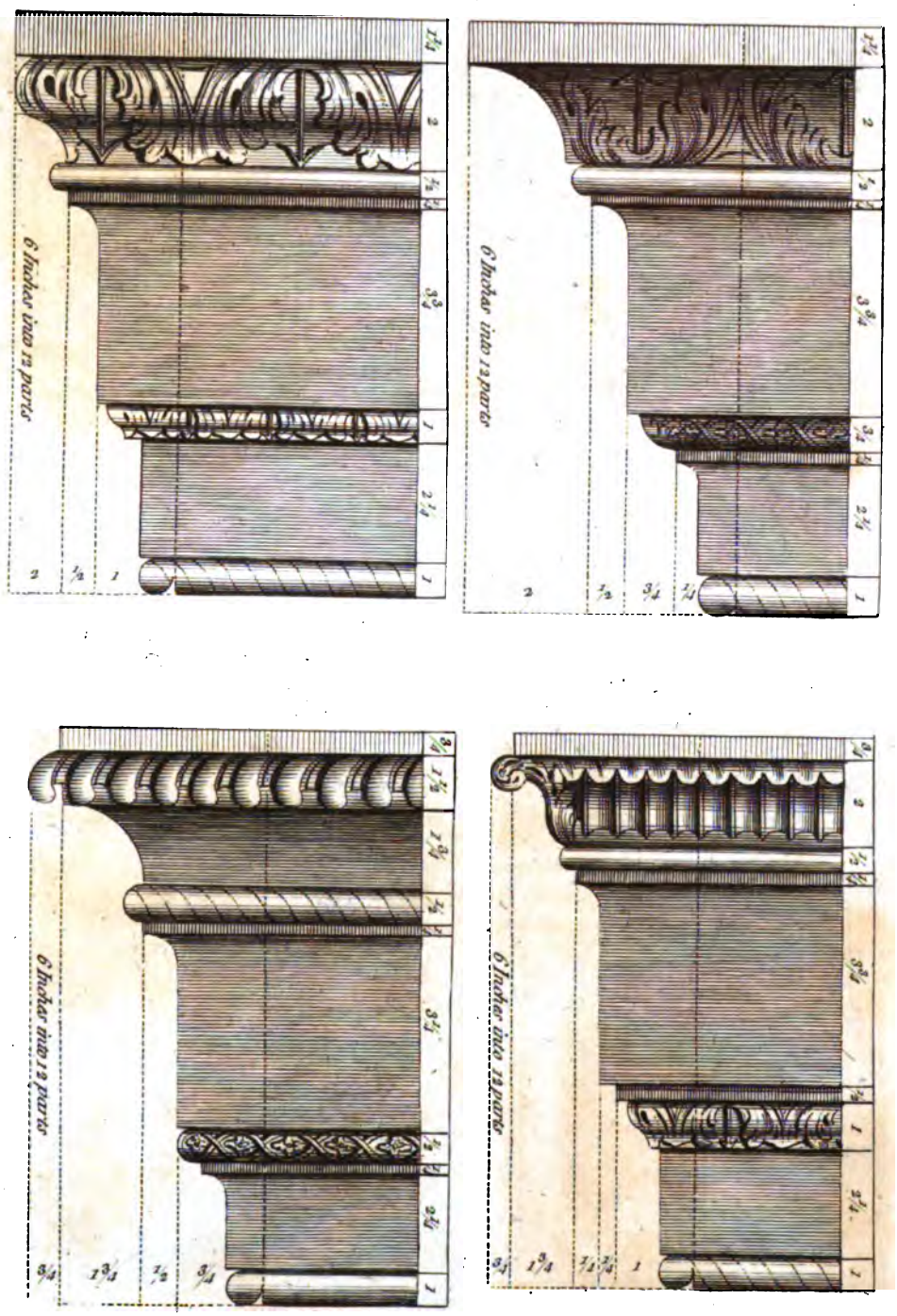




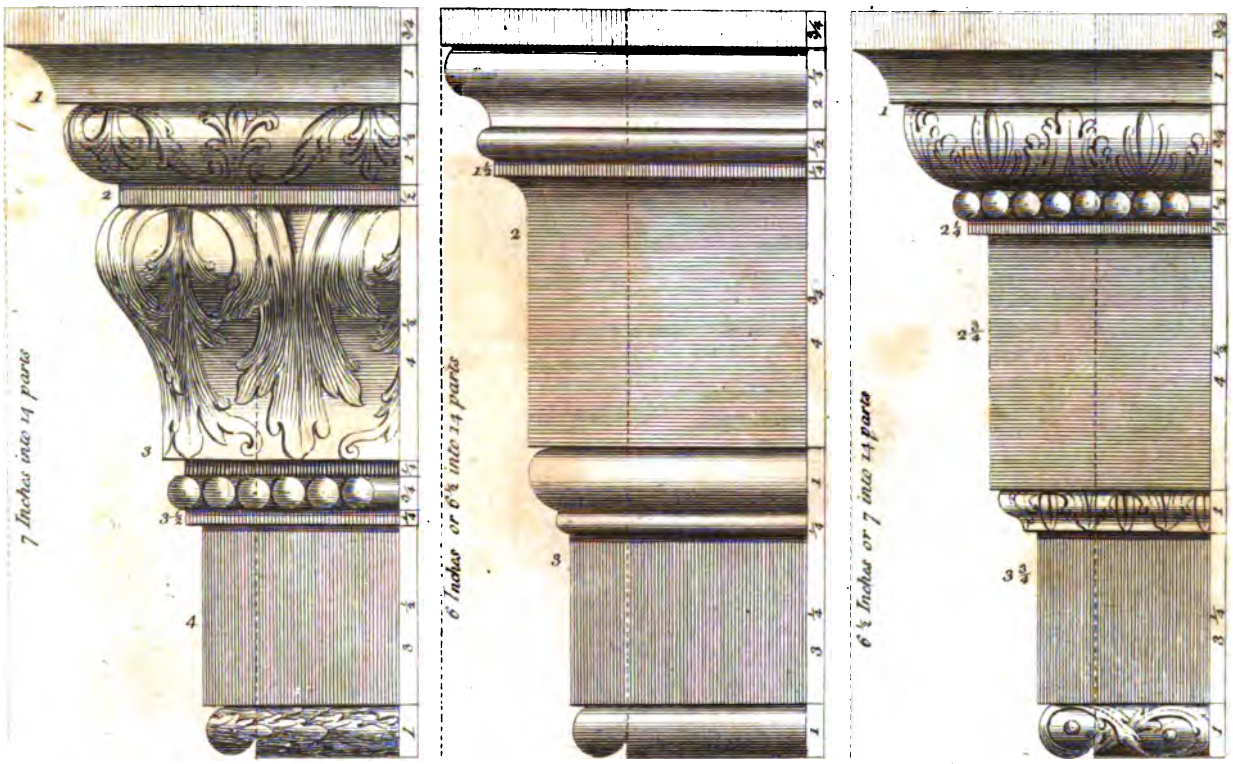
2 inches ditto

2 4 inches into 9 parts

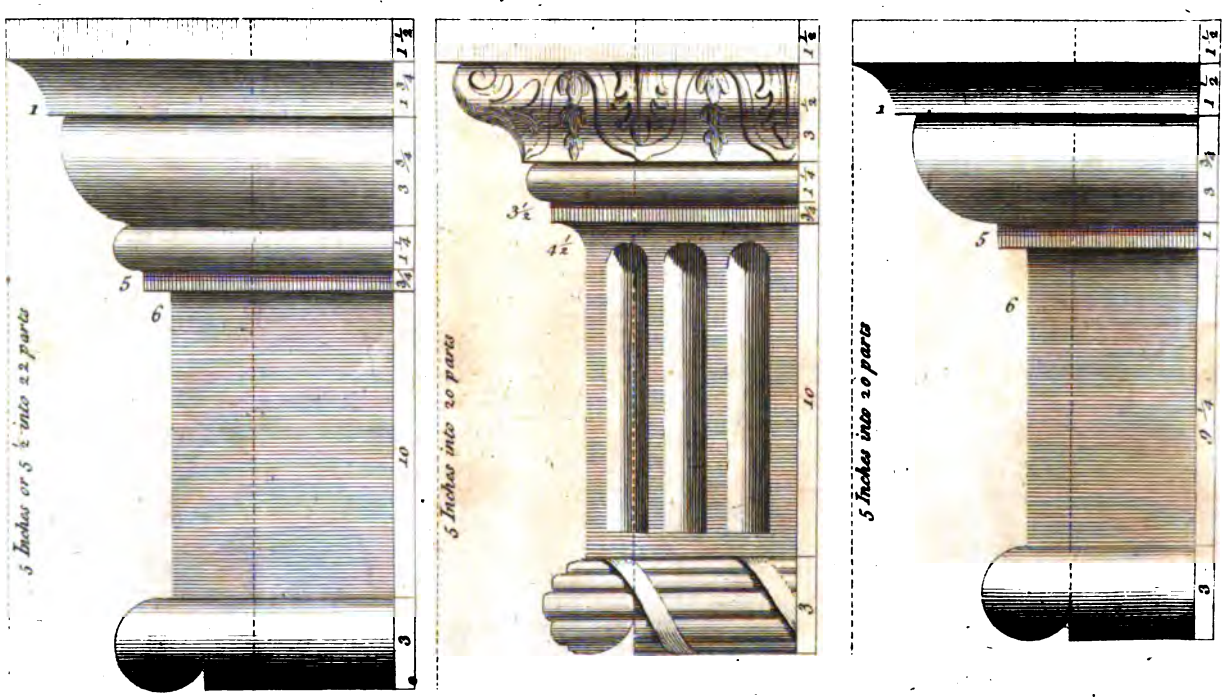


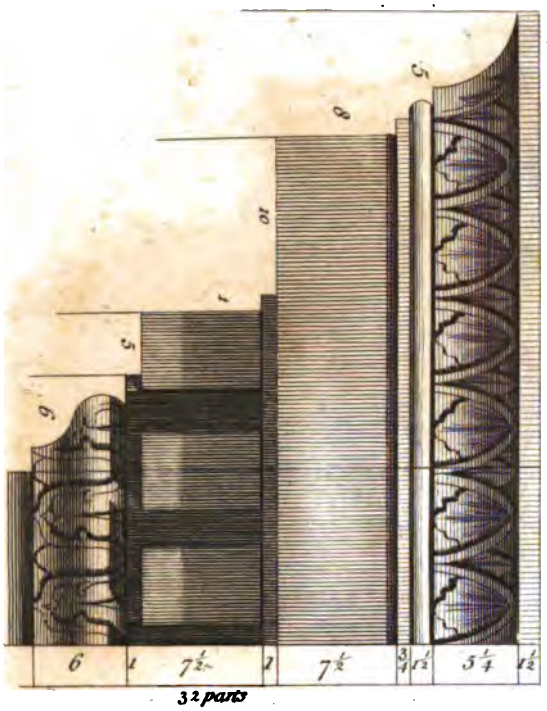


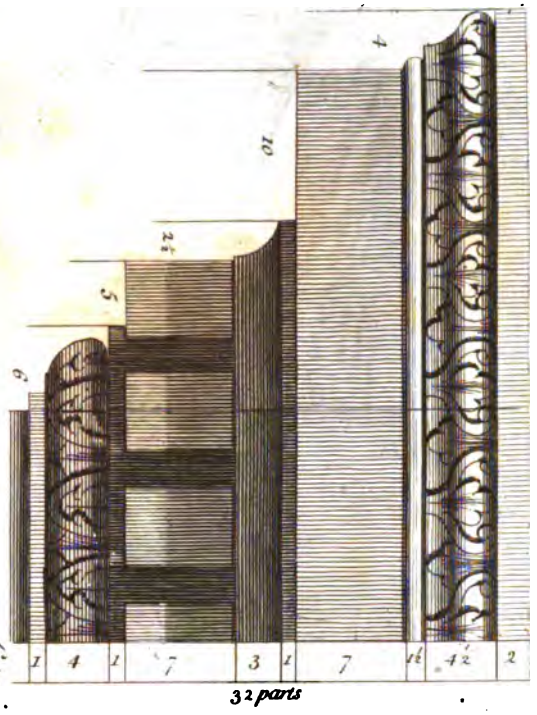
Architraves for Doors Windows &c. at large.



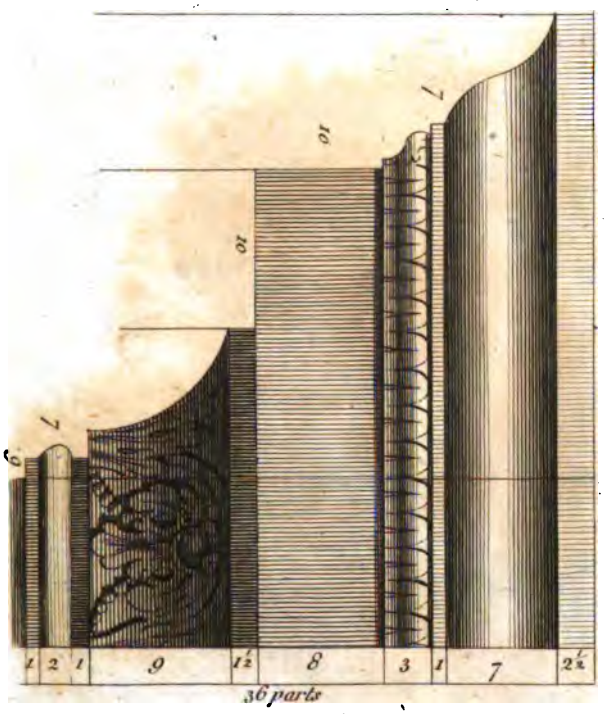
Architraves for Doors Windows &c.

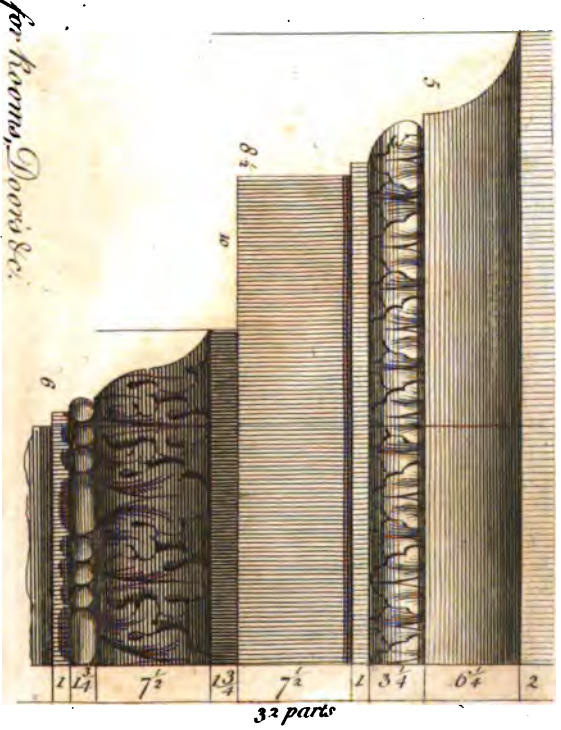




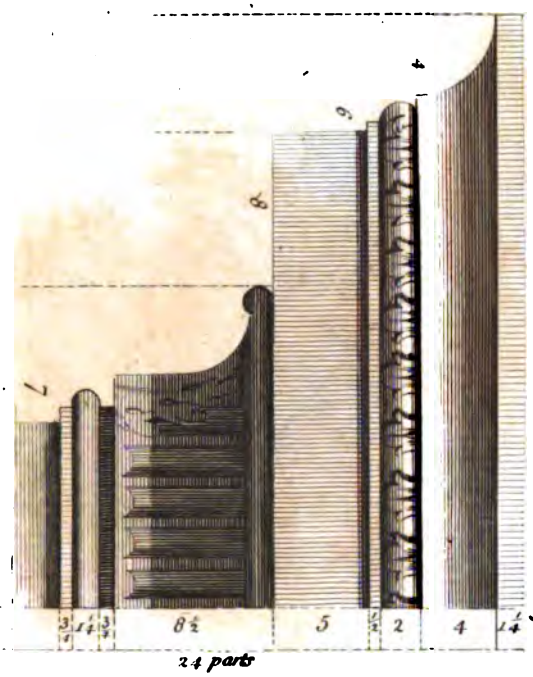


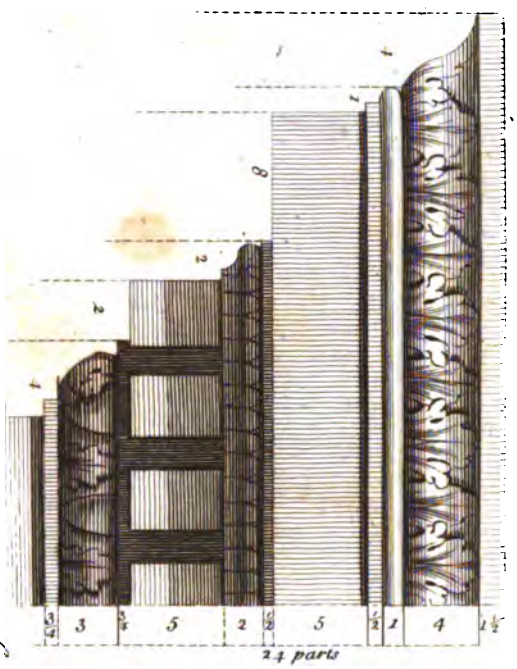
Cornices for Rooms, Doors &c.

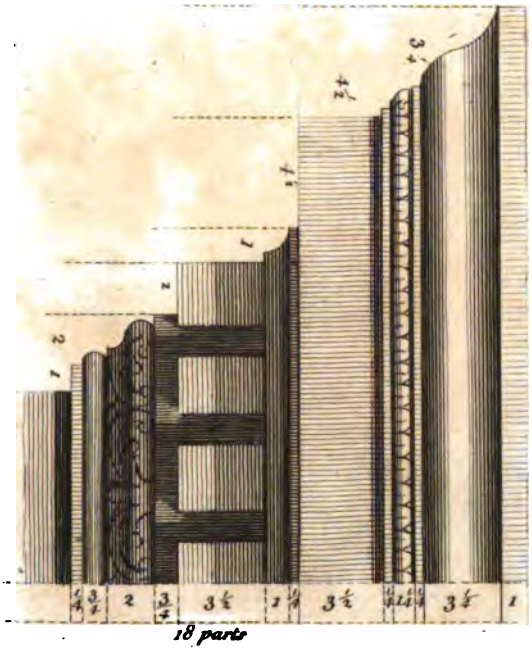


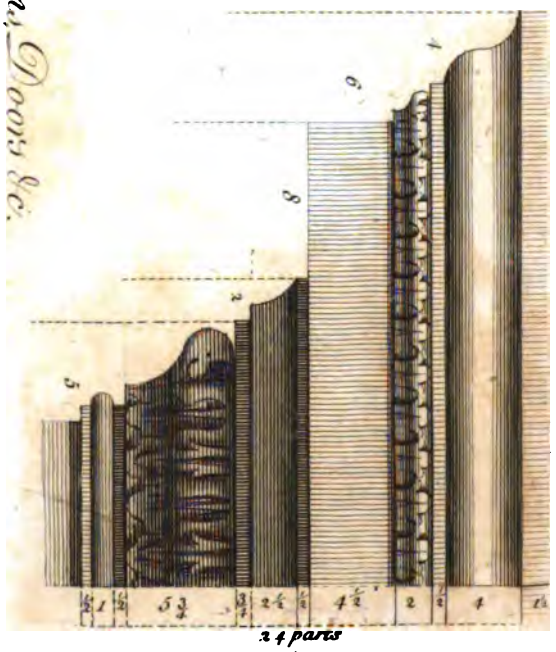


Cornices for Rooms, Doors &c.



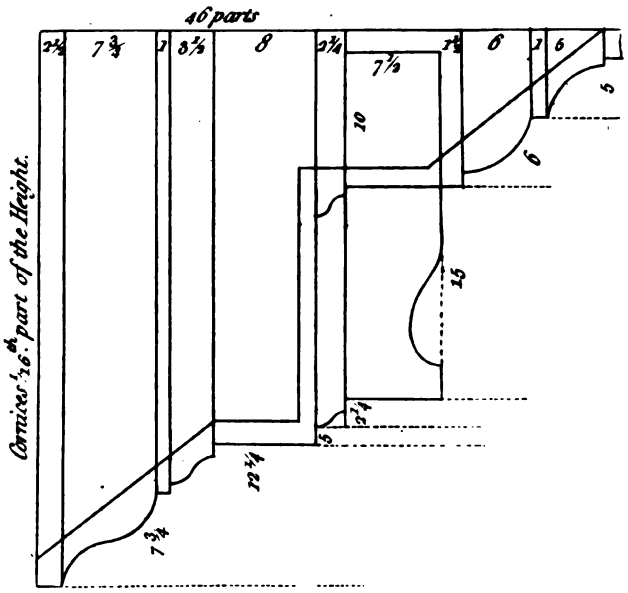


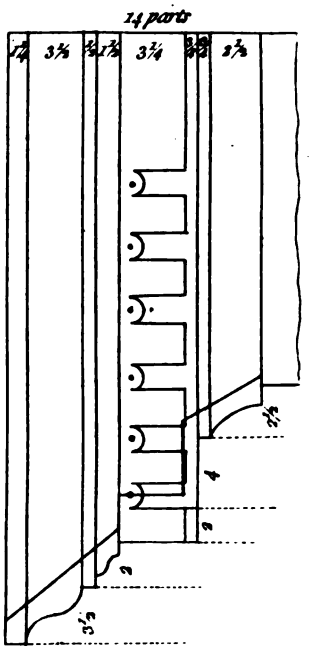


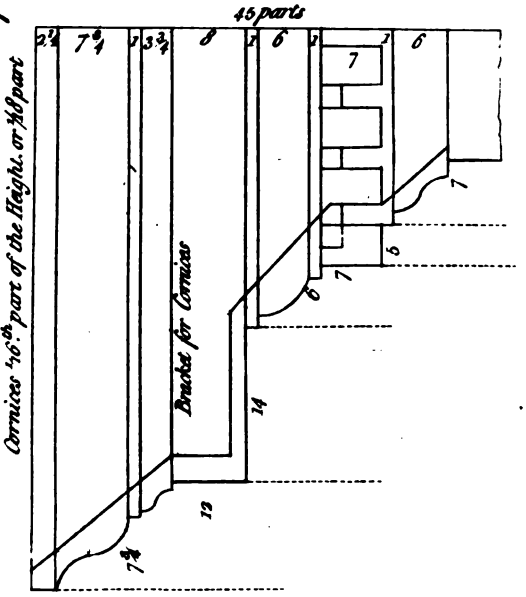


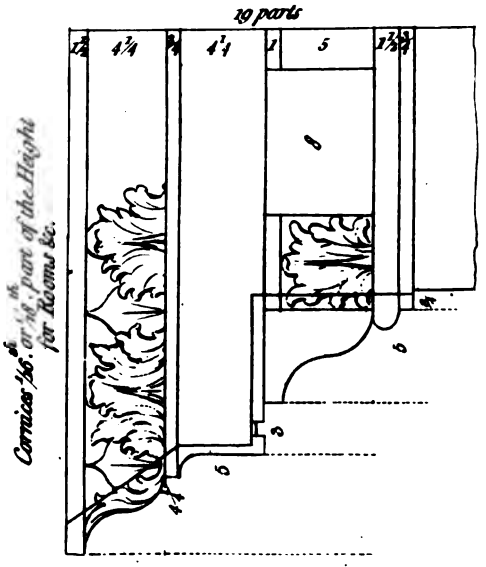
For Rooms 18 feet high. For Doors from 6 to 7 inches.
For chimneys from 4 inches to 4 ½.

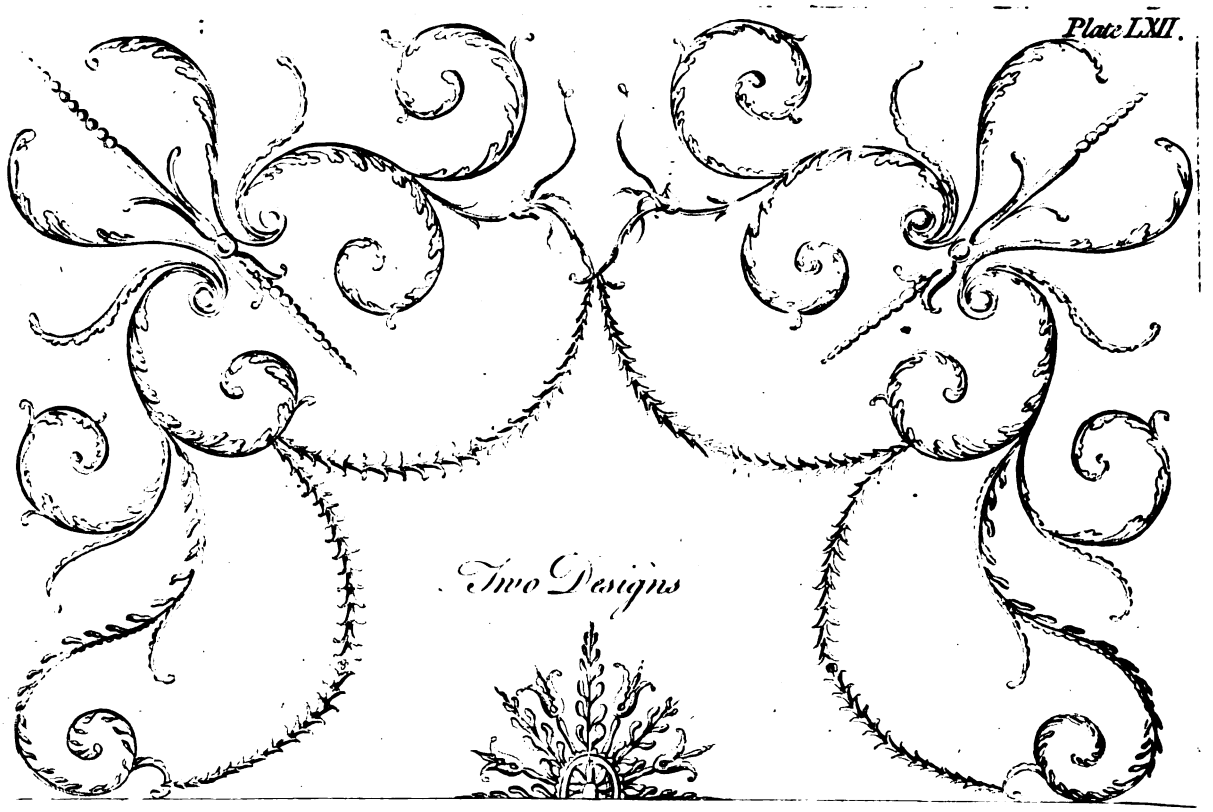
Cornices for Rooms &c.



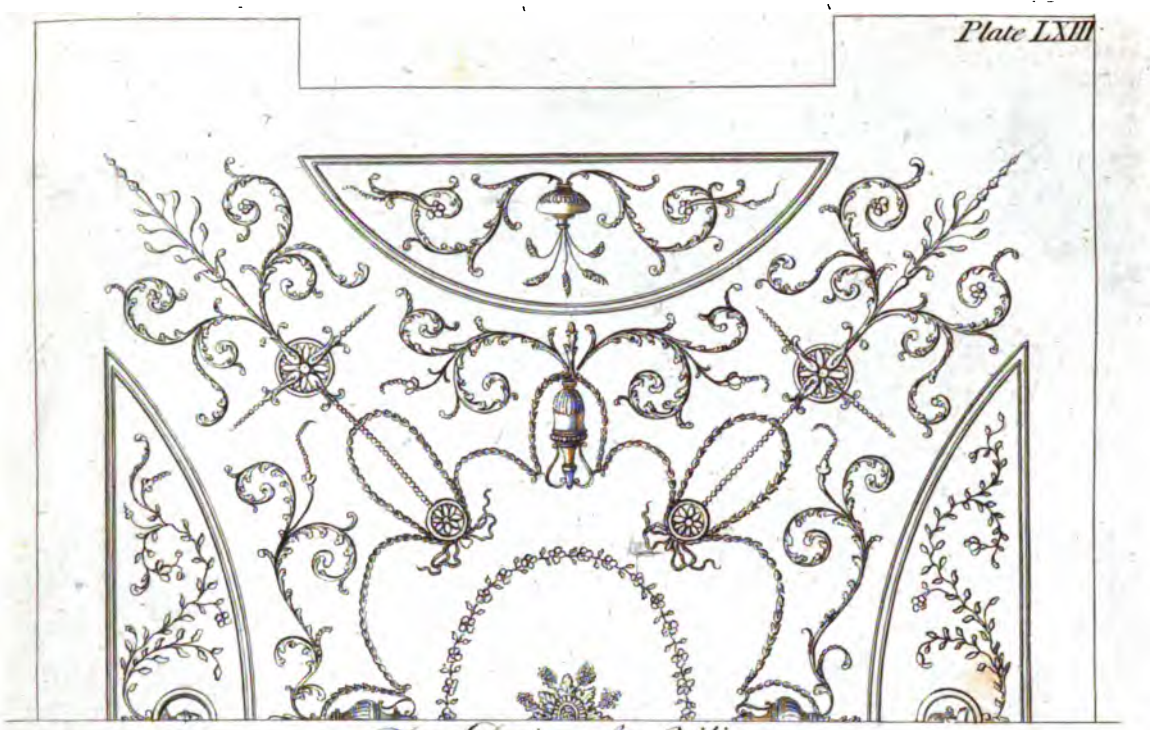






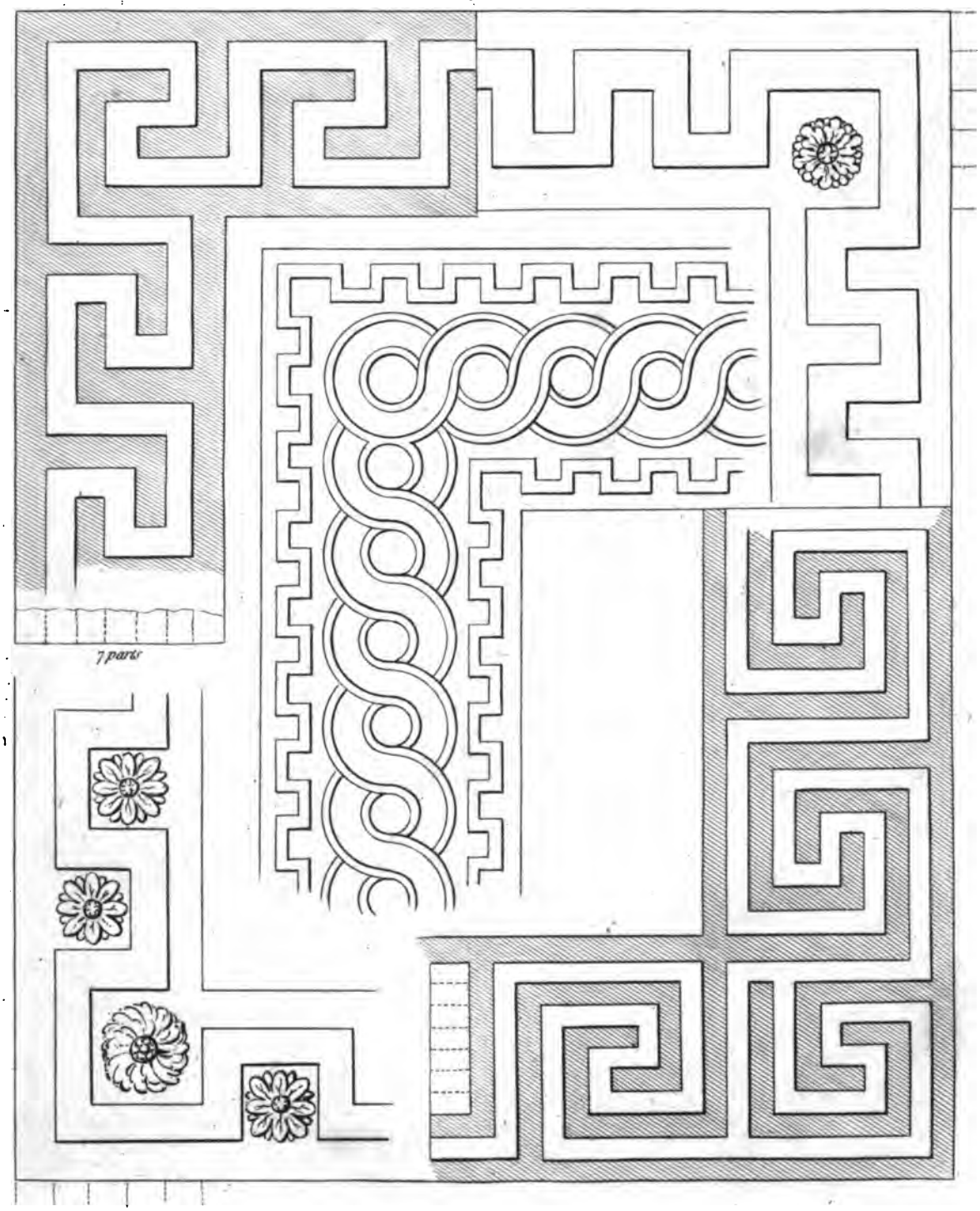

Two Designs

for Ceilings.

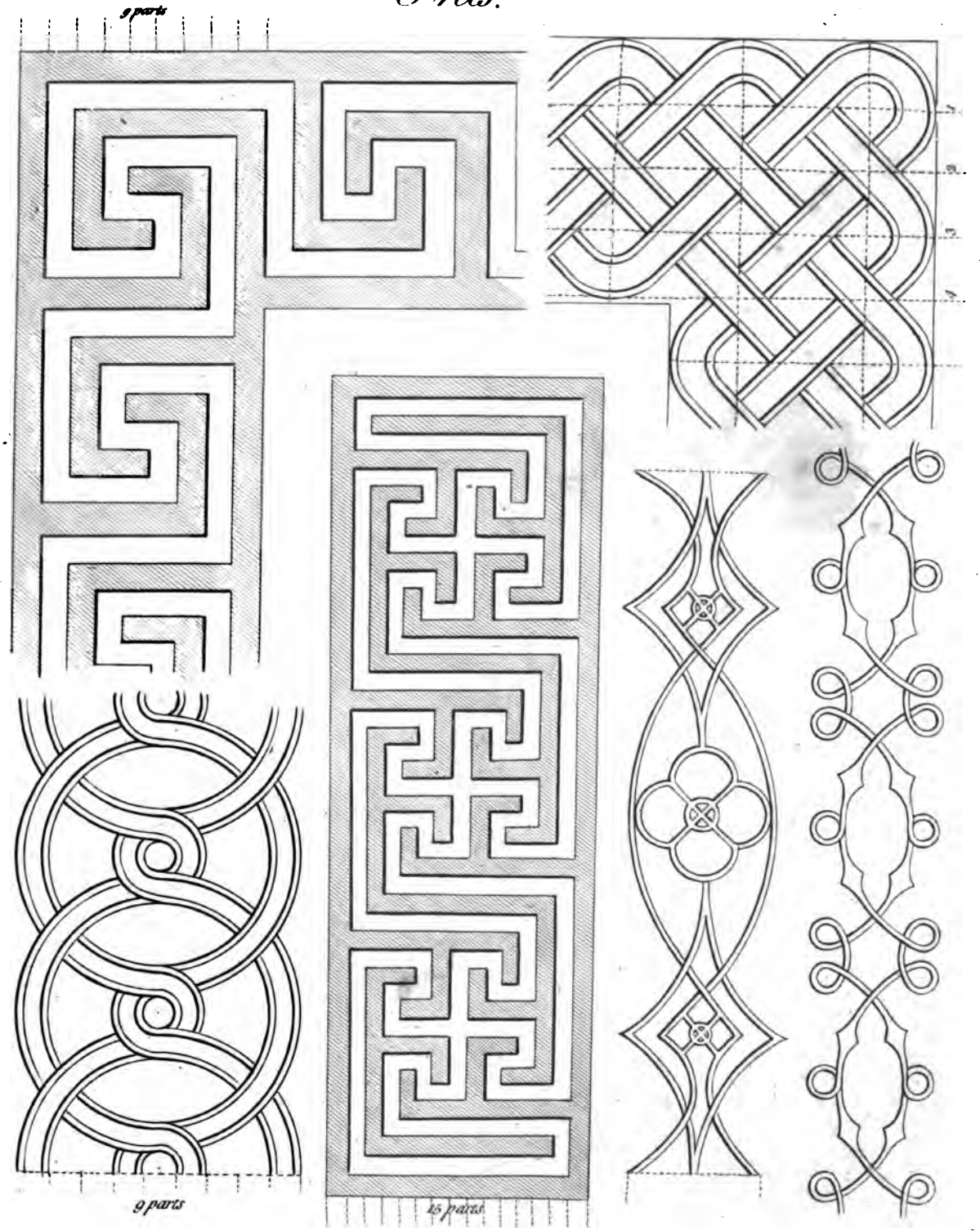


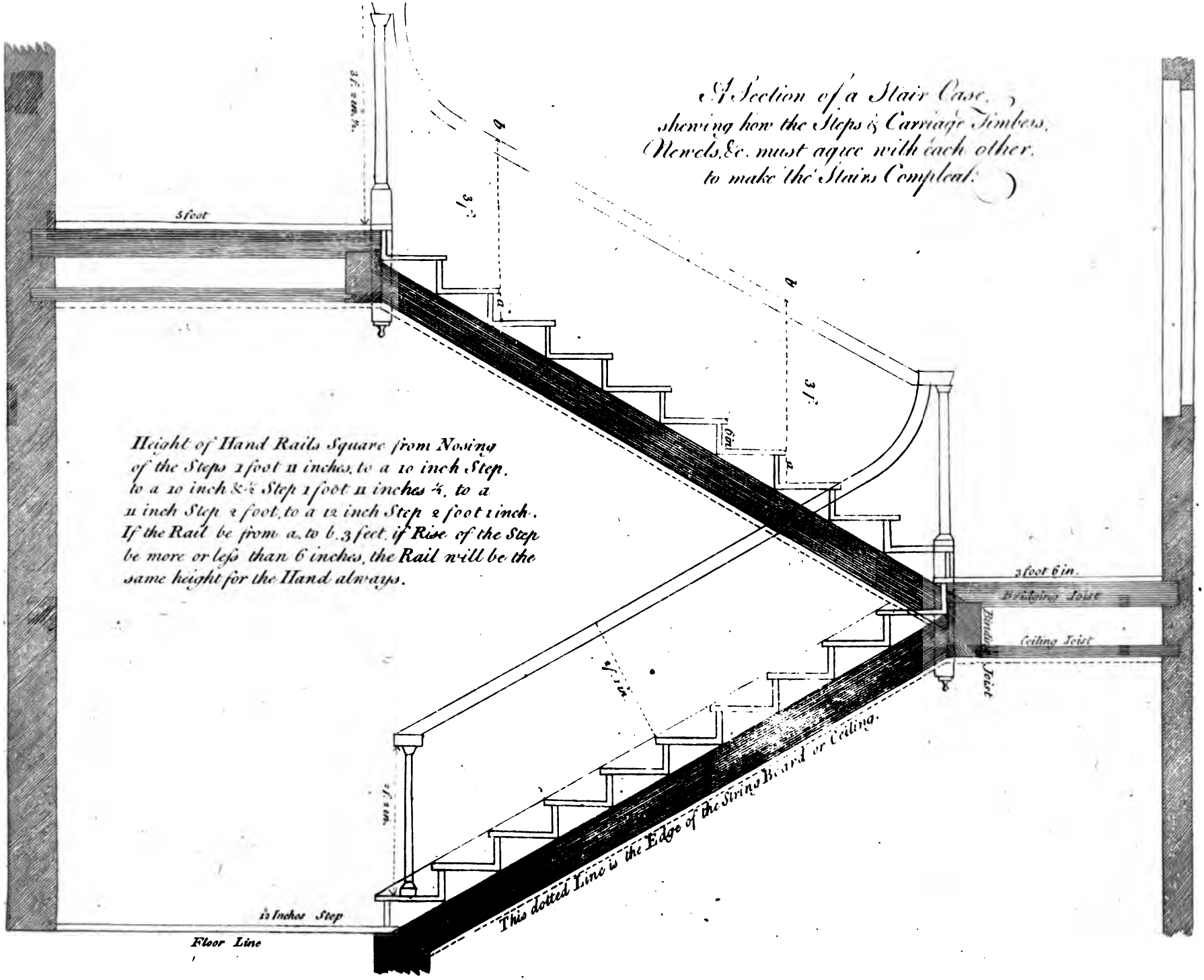
Two Designs for Ceilings.

Frets & Guiloches.



Frets.




A Section of a Stair Case,
shewing how the Steps & Carriage Timbers,
Newels, &c. must agree with each other,
to make the Stairs Compleat.
3 foot
3 foot 6 in.
Bridging Joist
Ceiling Joist
Floor Line
This dotted Line is the Edge of the String Board or Ceiling.

Height of Hand Rails Square from Nosing of the Steps 1 foot 11 inches, to a 10 inch Step, to a 10 inch & ½ Step 1 foot 11 inches ½, to a 11 inch Step 2 foot, to a 12 inch Step 2 foot 1 inch. If the Rail be from a. to b. 3 feet, if Rise of the Step be more or less than 6 inches, the Rail will be the same height for the Hand always.

Plate LXVI

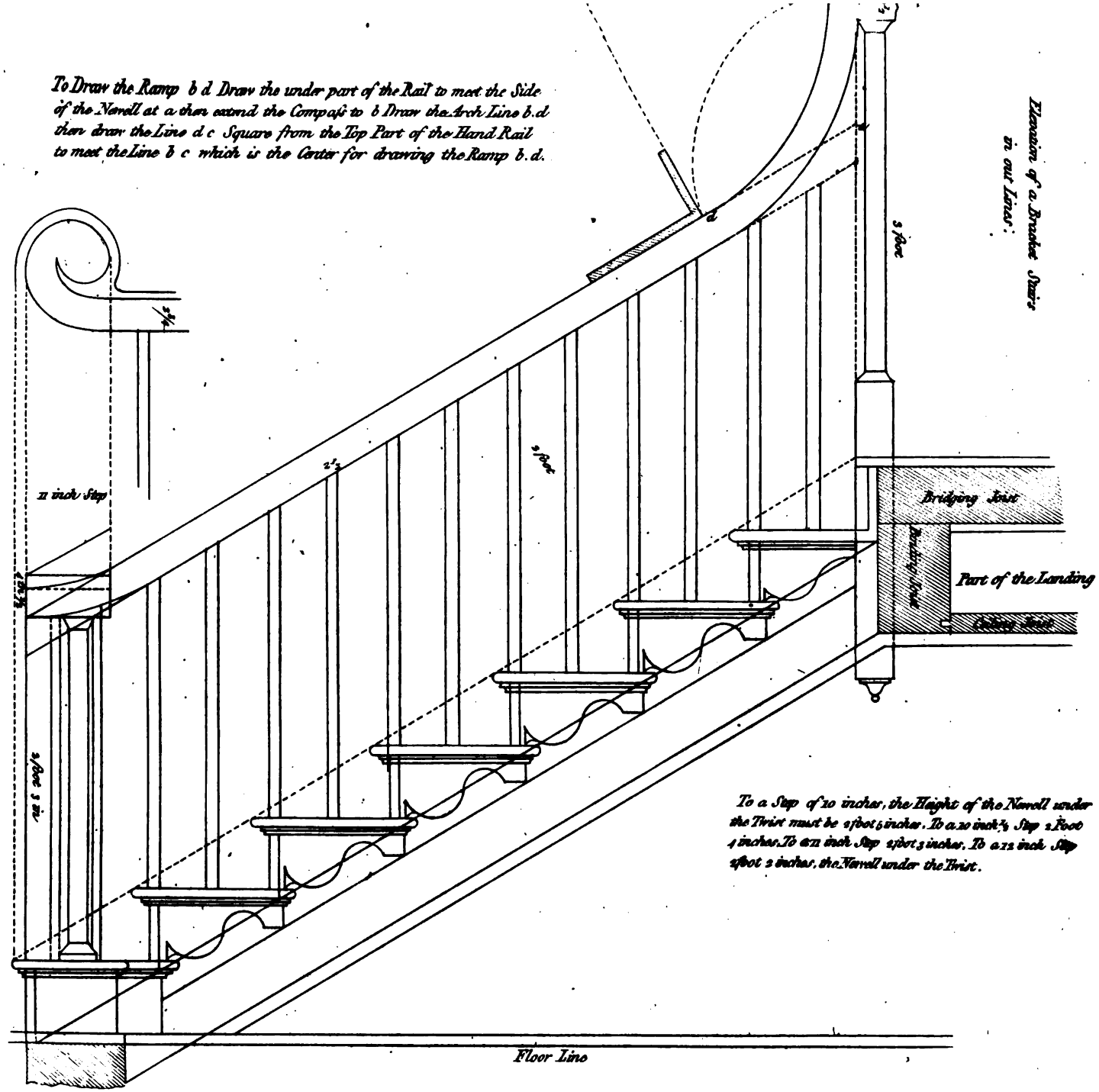
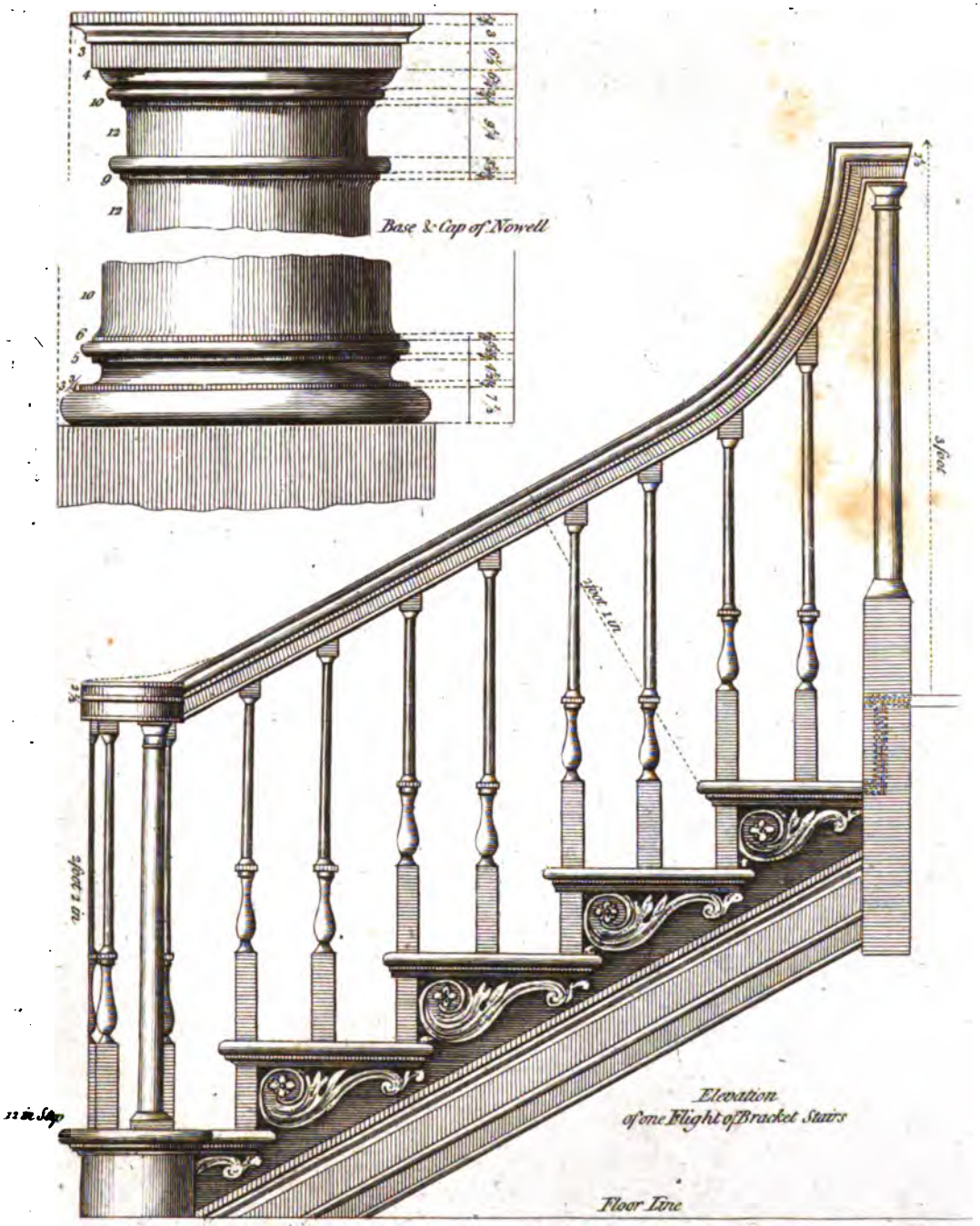

To Draw the Ramp b d Draw the under part of the Rail to meet the Side of the Newell at a then extend the Compass to b Draw the Arch Line b.d then draw the Line d c Square from the Top Part of the Hand Rail to meet the Line b c which is the Center for drawing the Ramp b.d.
Elevation of a Bracket Stair in out Lines.
3 foot
2 foot
2 foot 3 in.
11 inch Step
Bridging Joist
Bridging Joist
Part of the Landing
Ceiling Joist
Floor Line
To a Step of 10 inches, the Height of the Newell under the Twist must be 2 foot 5 inches. To a 10 inch ¾ Step 2 Foot 4 inches. To a 11 inch Step 2 foot 3 inches. To a 12 inch Step 2 foot 2 inches, the Newell under the Twist.

Plate LXVII.

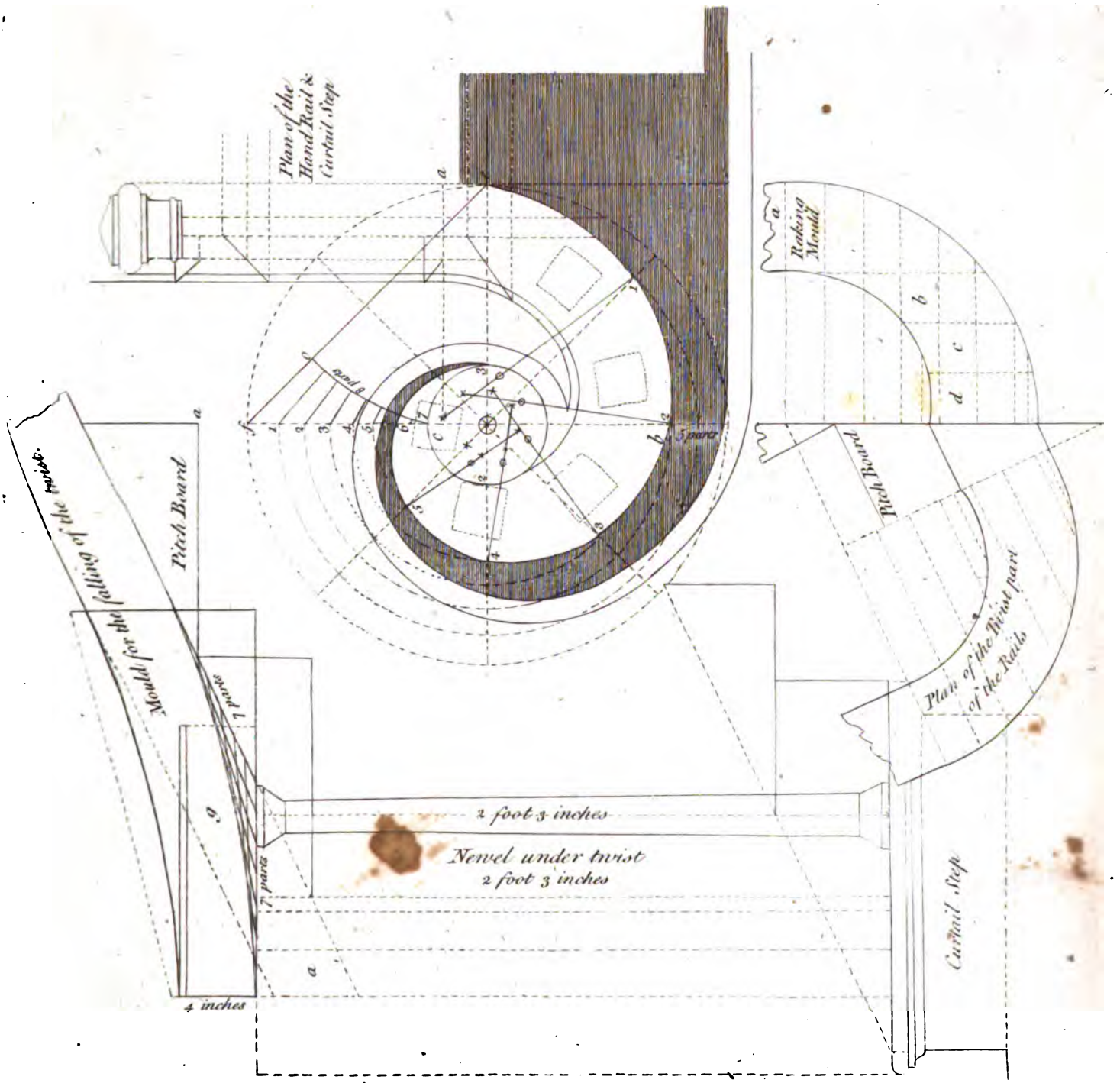

Base & Cap of Nowell
3 foot
Elevation
of one Flight of Bracket Stairs
Floor Line

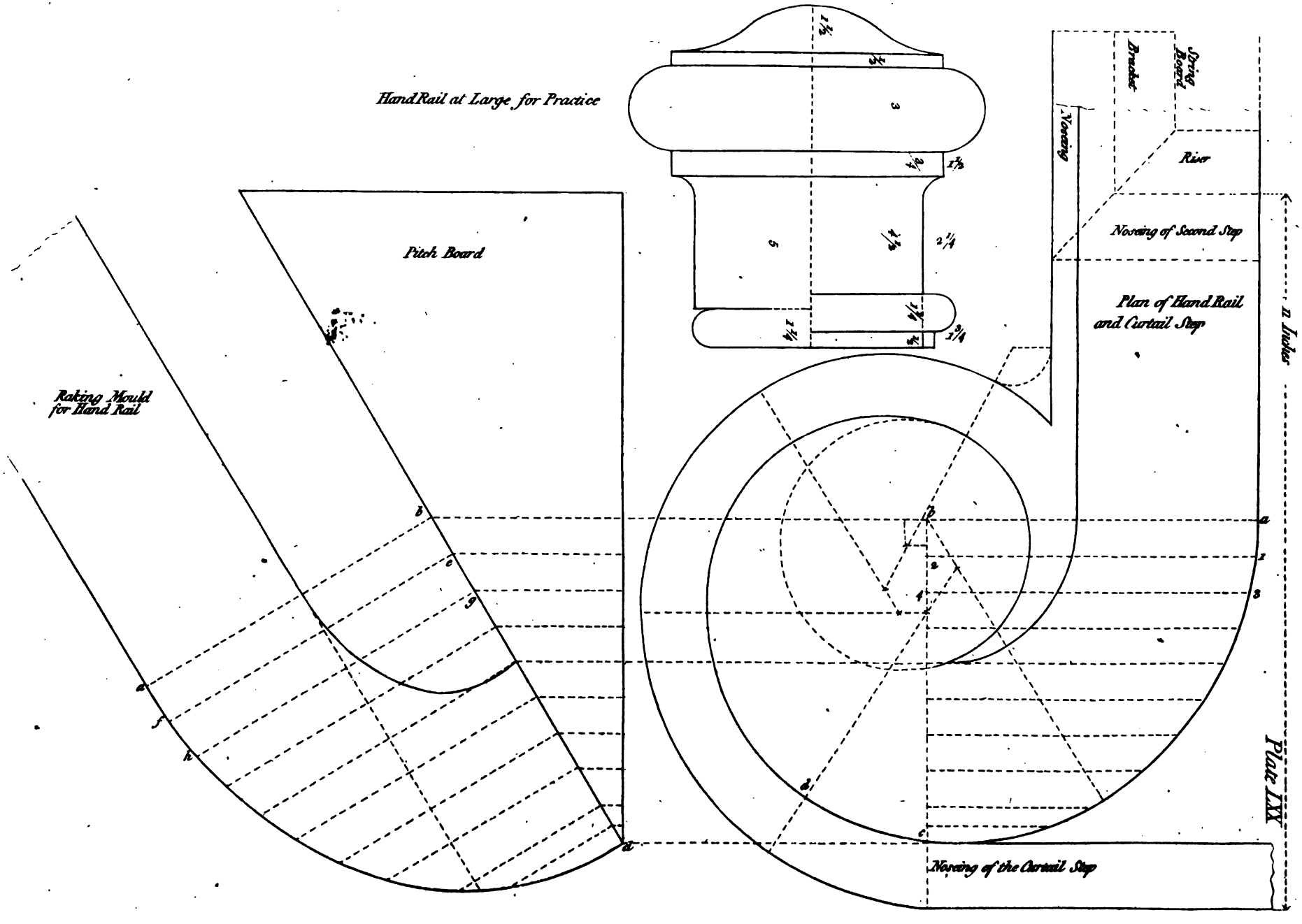
To Face PLATE LXIX.

To Draw the Plan and Scroll of a twiſt Rail for a Stair-caſe.

DRAW a Circle equal to the Breadth of two Steps, and divide it into eight Parts, then draw a Circle round the Centre five Inches Diameter, as 2, 3, then draw the Line *e f*, and ſet one Foot of the Compaſs at *e*, and draw the Arch Line 7, 0, which muſt be divided into eight Parts, and draw Lines from *e*, thro' each eighth Part to the Line 1, 2, 3, 4, 5, &c. then ſet the Compaſs in the Centre of the Scroll, and draw the dotted Lines from 1 on the Scale to 1 on the Edge of the Rail, and from 2 to 2 on the Edge of the Rail, and ſo for all the Reſt to each eighth Part of the Circle, which gives the outer Edge of the Rail.

To find the Centre for drawing each eighth Part, ſet one Foot of the Compaſs in the Centre of the Scroll, and take the Diſtance to *f*, with the ſame Radius; ſet the Foot at *e*, and make a Mark at *c*, and with the ſame Radius ſet one Foot at 1 on the Edge of the Rail, and biſect the former Stroke at *c*, which is the Centre for the firſt eighth Part, then take from the Centre of the Scroll to 1 on the Scale, and ſet one Foot at 1 on the Edge of the Rail, make a Mark in the Eye and move the Compaſs to 2 on the Edge of the Rail, and biſect the former Stroke; that is the Centre for the ſecond eighth Part, and ſo on for all the Reſt. The Centre for the Front of Riſer and Noſing of Step are the black Dots, one fifth Part from the Rail to the Noſing of the Step without the other Centre; the Pieces which make the Twiſt-part of the Rail are *d*, *c*, *b*, on the raking Mould the Twiſt begins at *a* on the Edge of the Rail, and ends at three on ditto, the remaining Part is level; the lower Part of the Scroll from 2 is cut out of a parallel Piece, as repreſented by *g* on the Newel, &c.


Plan of the Hand Rail & Cartail Step
Raising Mould
Pitch Board
Mould for the falling of the twist
Pitch Board
Plan of the Twist part of the Rails
2 foot 3 inches
Newel under twist
2 foot 3 inches
7 parts
7 parts
4 inches
Cartail Step


Hand Rail at Large for Practice
Pitch Board
Raking Mould for Hand Rail
Plan of Hand Rail and Curtail Step
Nosing of Second Step
Nosing of the Curtail Step
Boring Board
Bracket
Rise
Flooring
11 Inches
Plate LXX

Falling Mould for the Twisted Part of the Hand Rail traced by the intersection of Right Lines which shews the Wood to be Cutt off in the Squaring of the Twist and gives it an easy Ramp in the Twistrd Part.

In Plate 70 take the Girt of the Plan from where the Twist begins at a. Round to d, as under. then Divide from p the Point of the Pitch Board to d into a number of equal Parts and f p into the same number of Parts. and draw the Right Lines. will give the falling of the Twist.

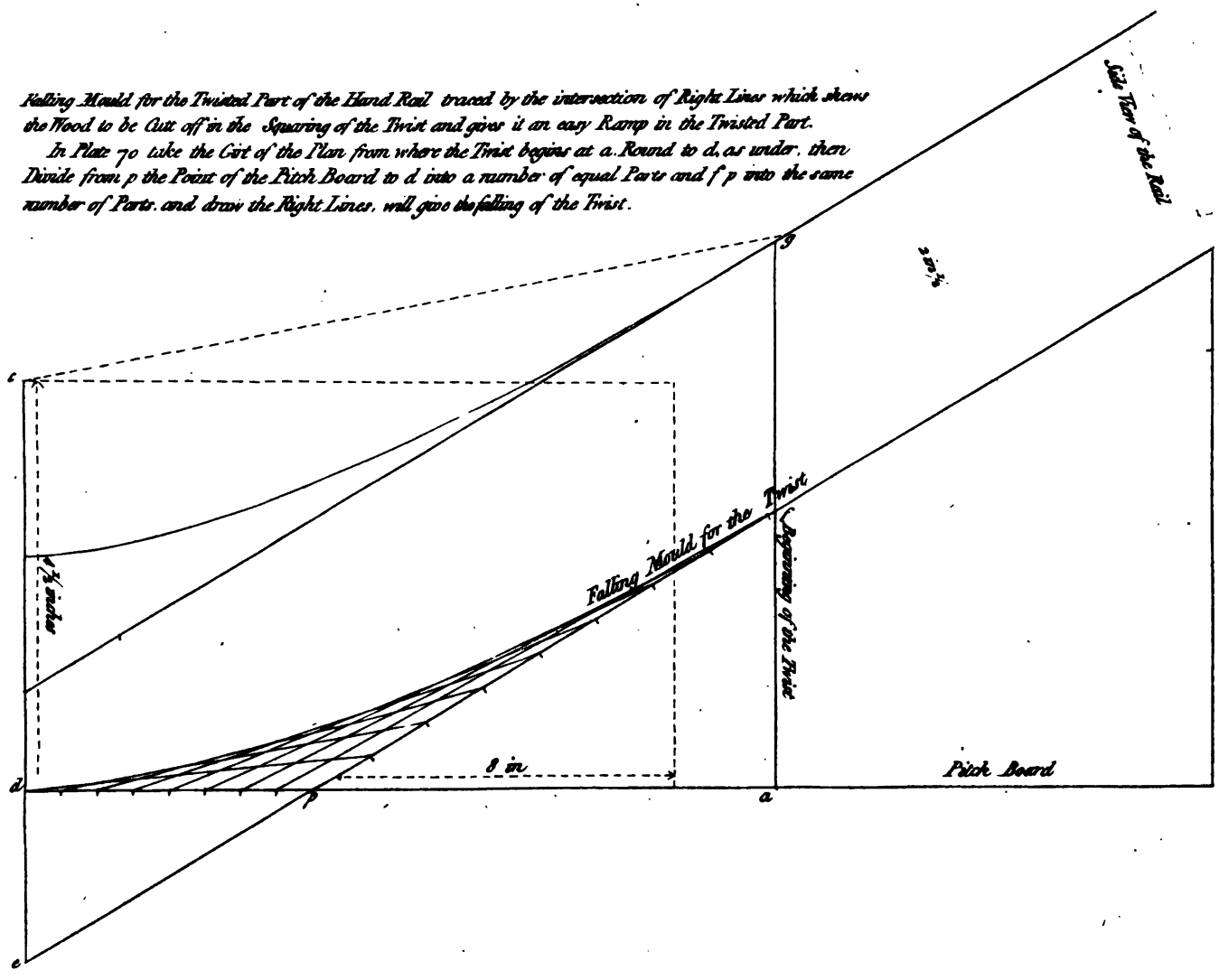
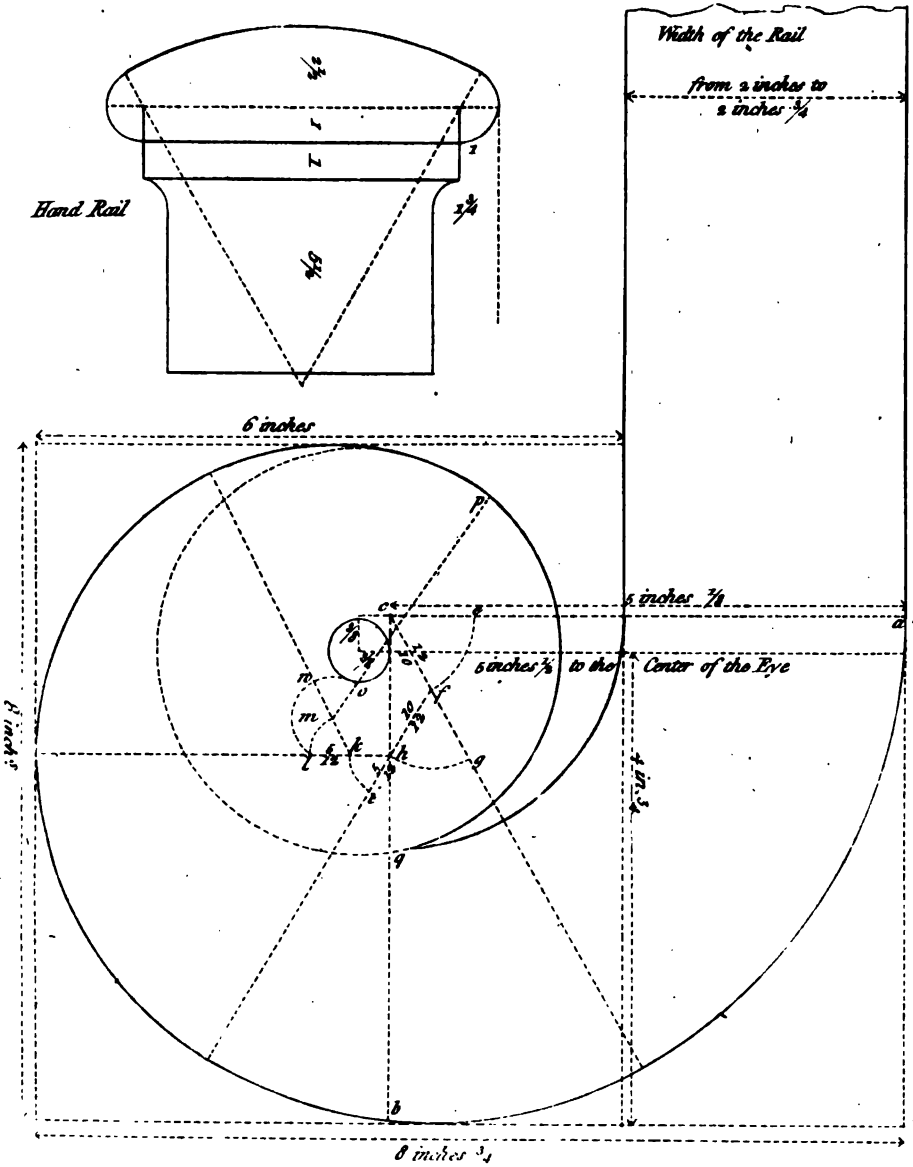


Plate LXV.

The Twist Rail with its Measures exactly figured.


Width of the Rail
from 2 inches to 2 inches 3/4
Hand Rail
6 inches
5 inches 7/8
5 inches 7/8 to the Center of the Eye
4 in. 3/4
8 inches 3/4

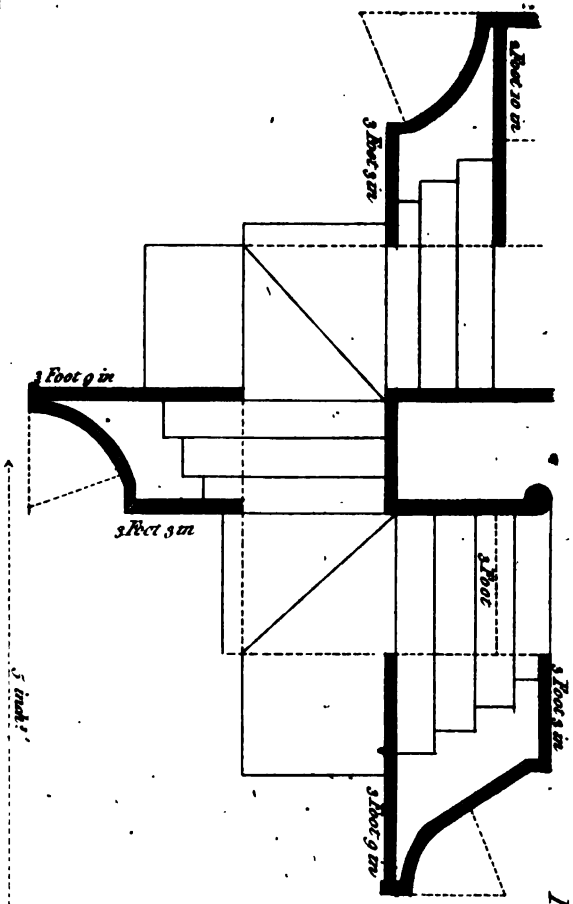
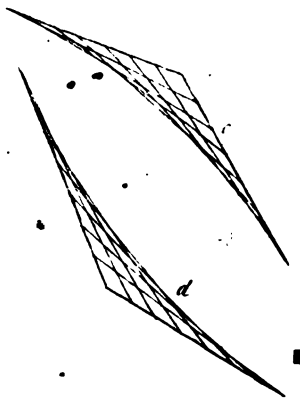
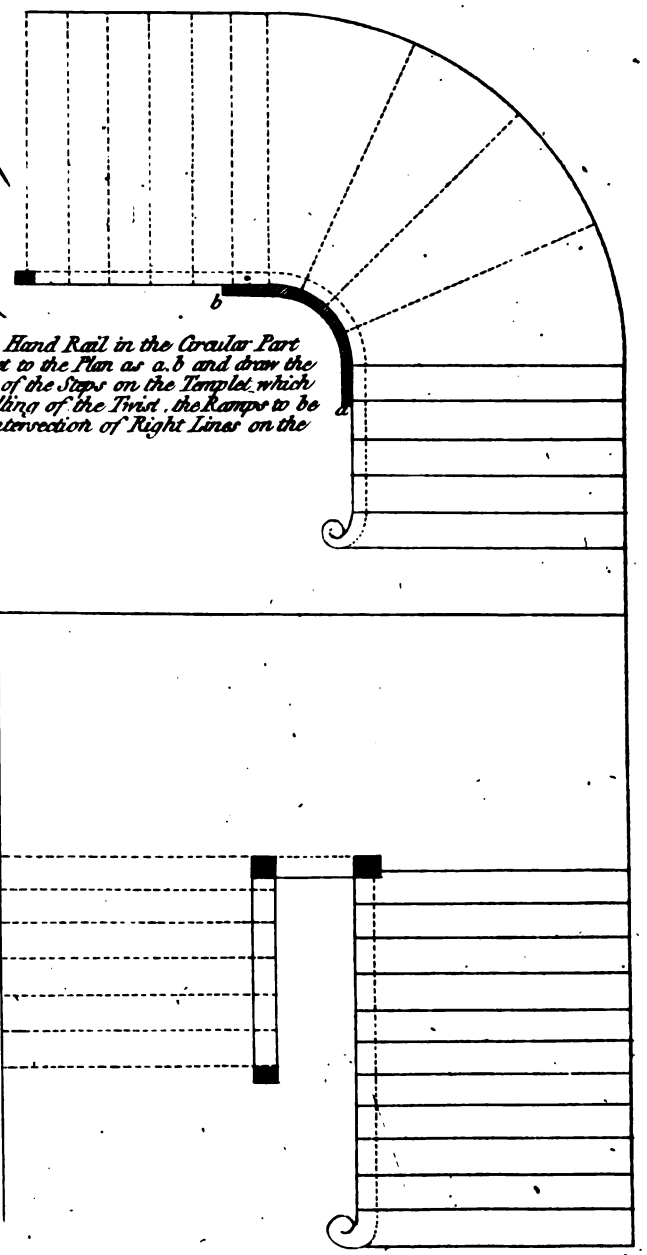


Plate LXXII.

Two Plans for Stair Cases

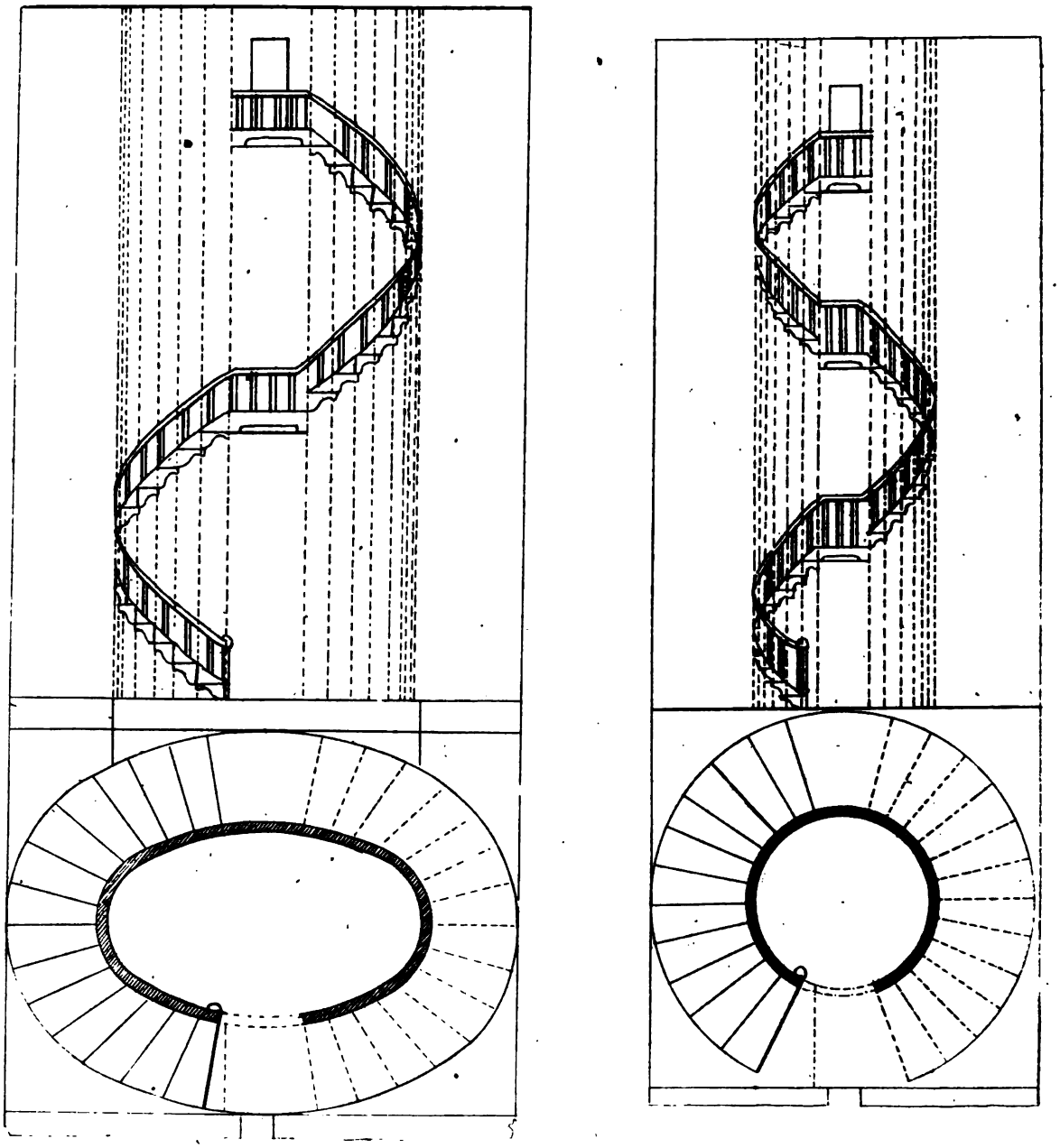




To Glew up this Hand Rail in the Circular Part make a Templet to the Plan as a.b and draw the Rise and Tread of the Steps on the Templet, which will give the falling of the Twist, the Ramps to be traced by the intersection of Right Lines on the Templet as c.d.

Banister for Stairs.

Plan & Elevation of a Circular & Oval Stair Case. Plate LXXIV.



To be lighted by a Dome or Cone Lanthorn at the top, if placed in the middle of a Building. If on the outside may be lighted by Windows in the Wall at each landing.

To make the Hand-rail make a Templet or Cylinder to the well hole or open of the Rail, draw the tread & rise of each Step on the Cylinder, and that will give the falling of the Rail which is to be glewed in thickness bent round the Cylinder, then the Rail will come off ready squared, this is a very sure way to make the Rail.

Plan, Elevation & Section of a Gentleman's House, the Offices being in the Basement Story.

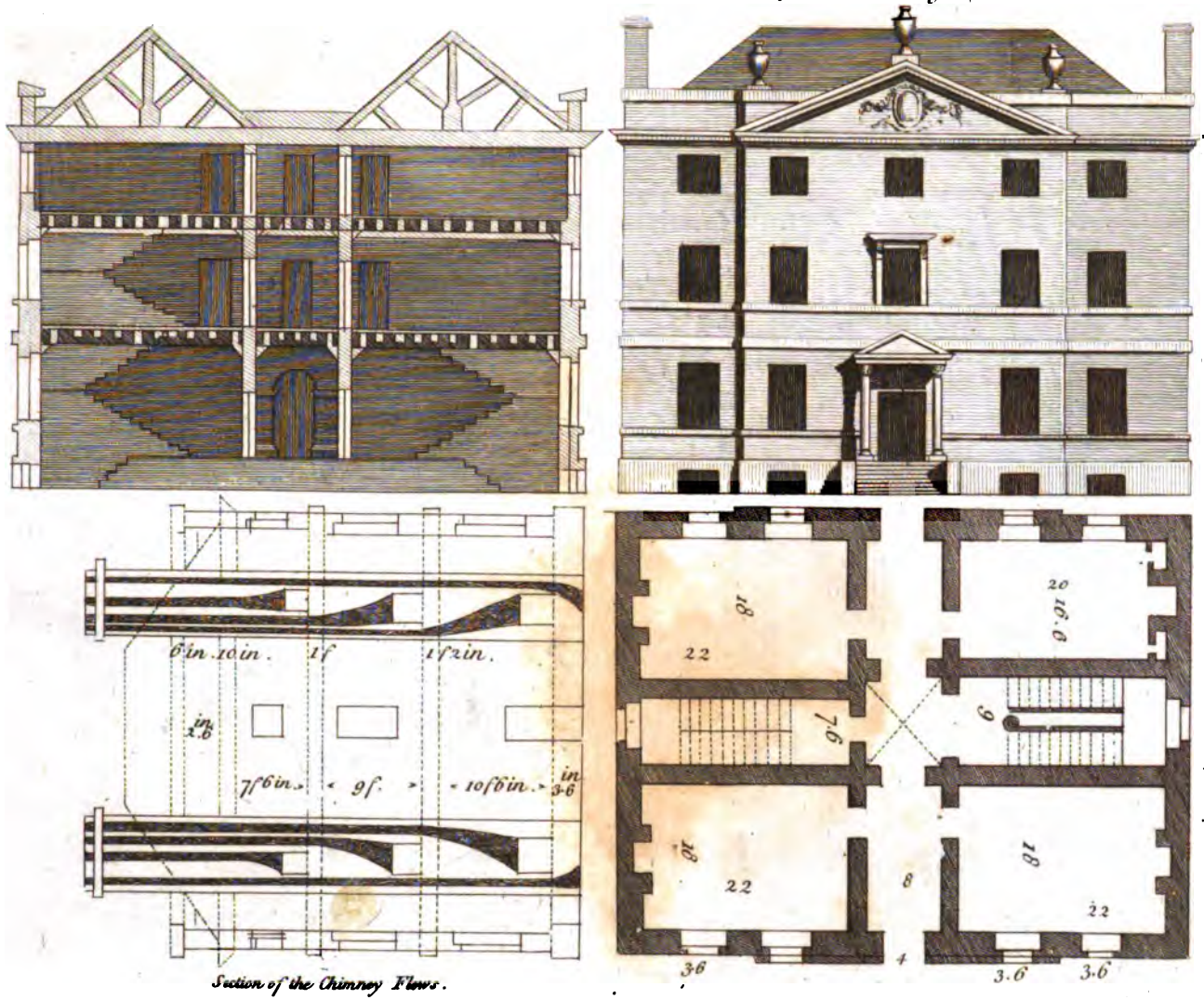
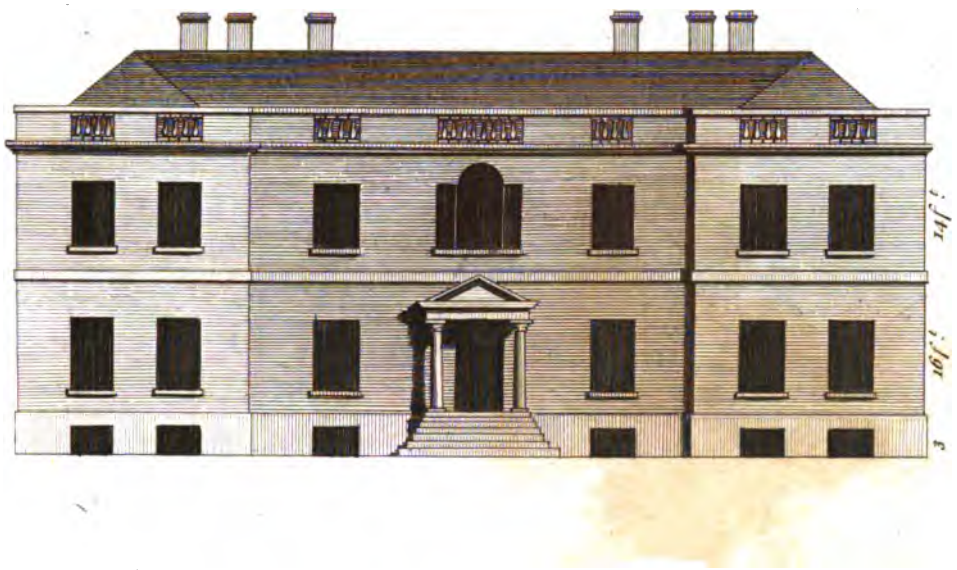
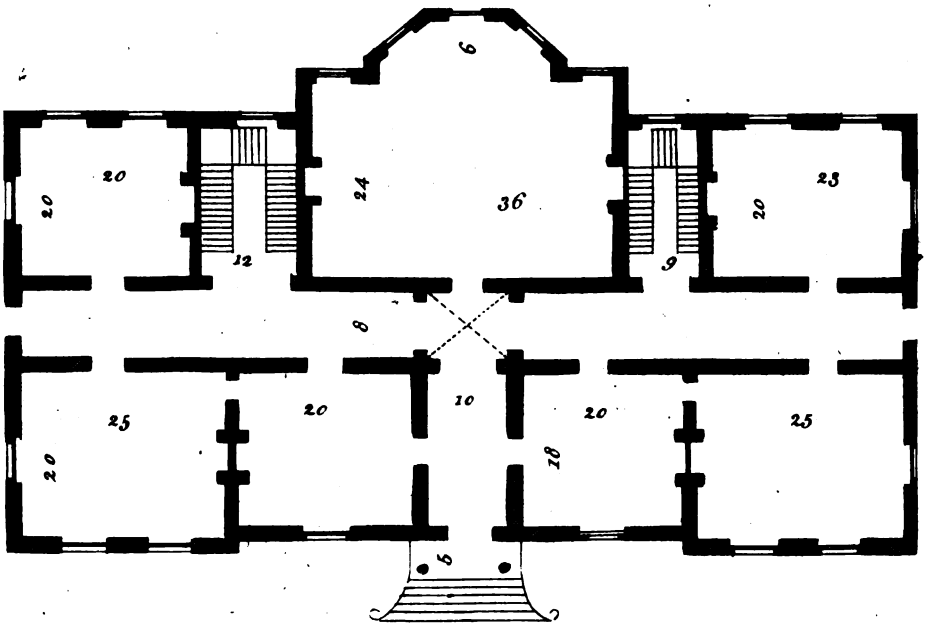


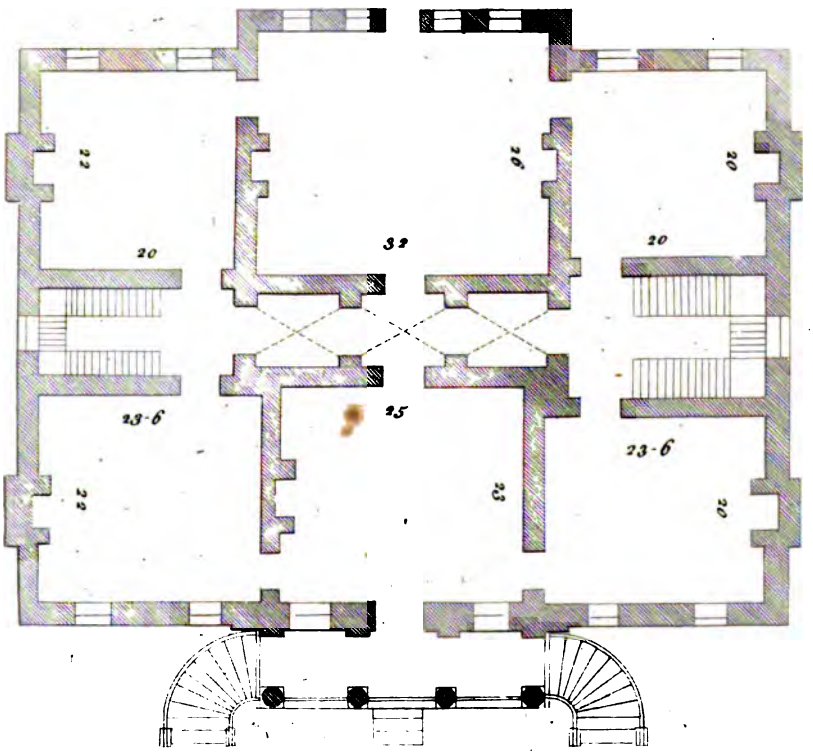
Plate LXV.

Plan and Elevation of a Gentleman's House.





Plan & Elevation of a Gentlemans House.



Plan & Elevation of a House for a large Family.

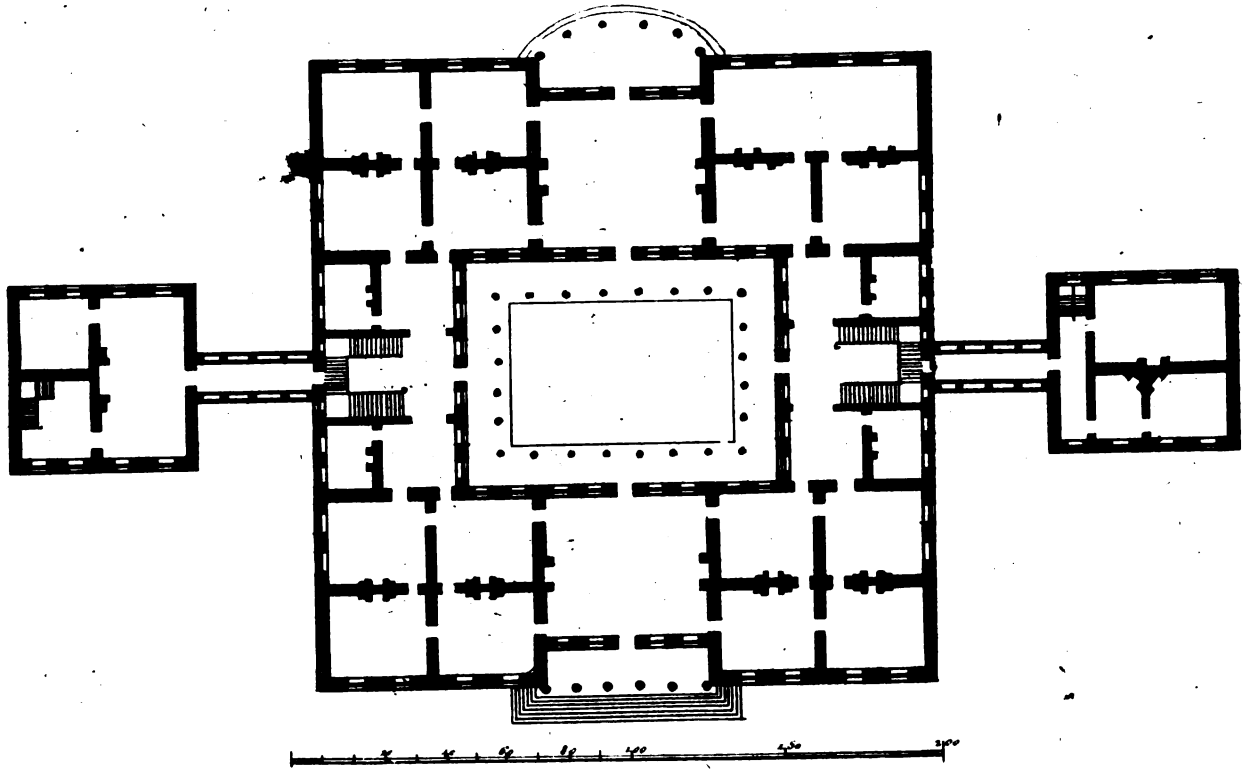
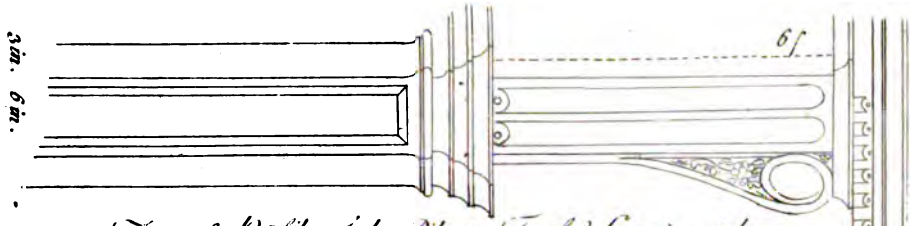
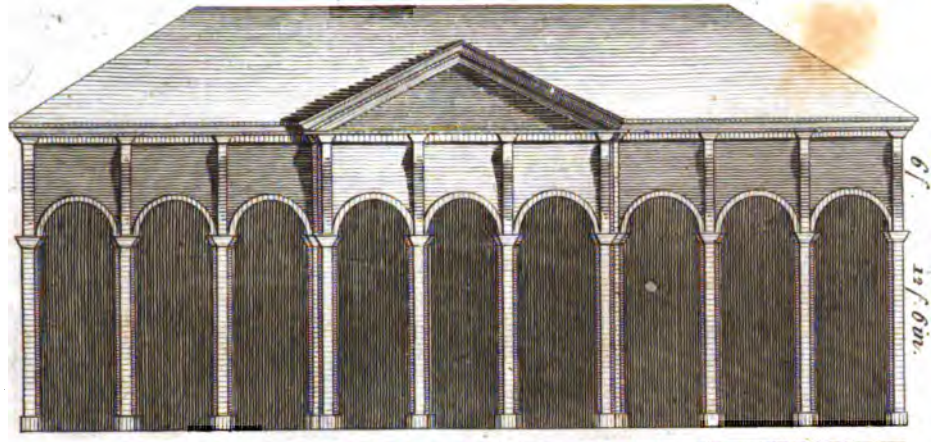
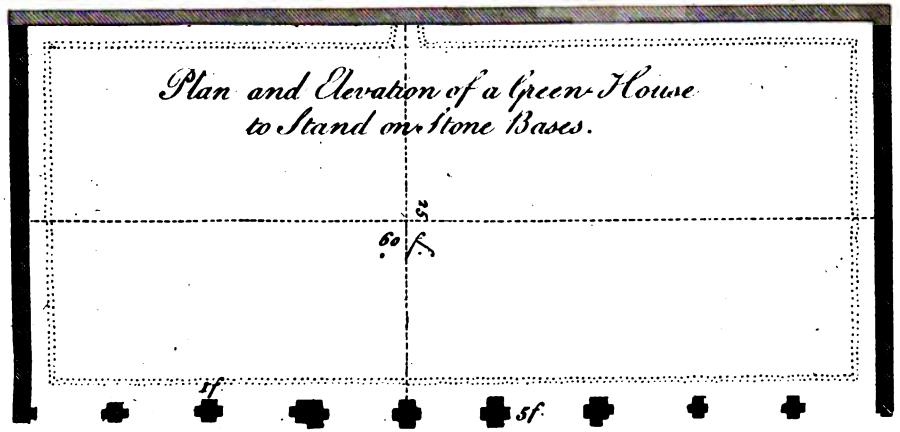


Plate LXVIII



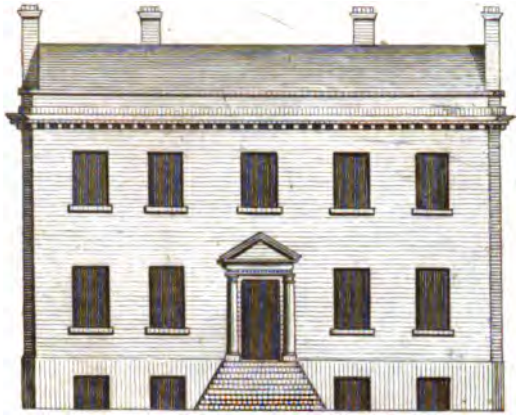
Front & Profile of the Pilaster Truss & Cornice at large for Green-House.





Plan and Elevation of a Green-House to Stand on Stone Bases.

Plan and Elevation for a Dwelling-House.



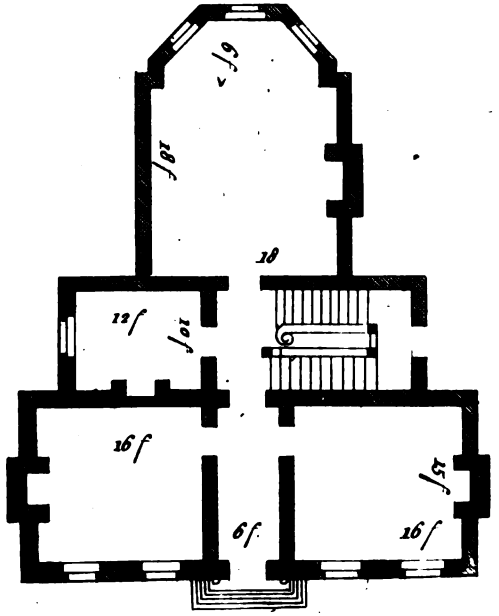
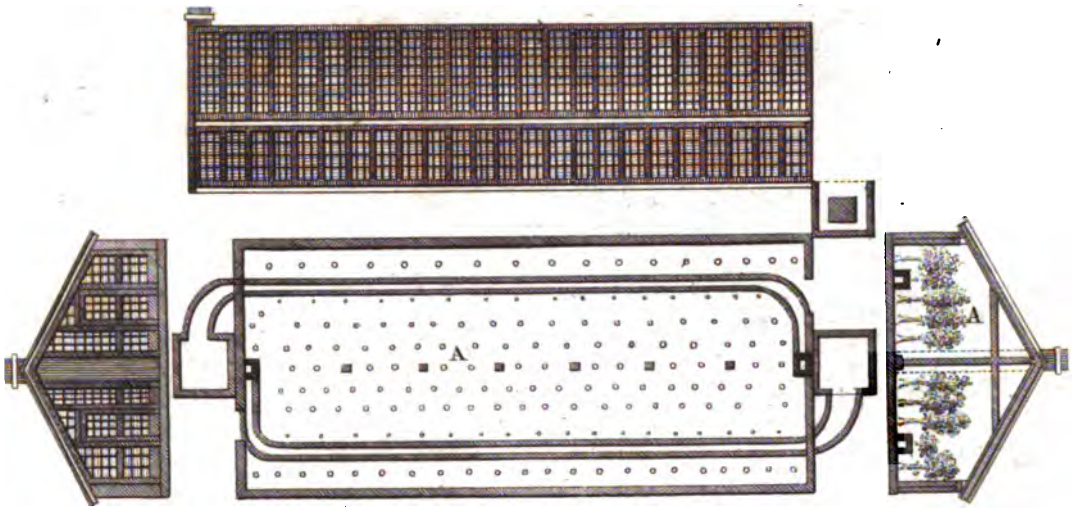
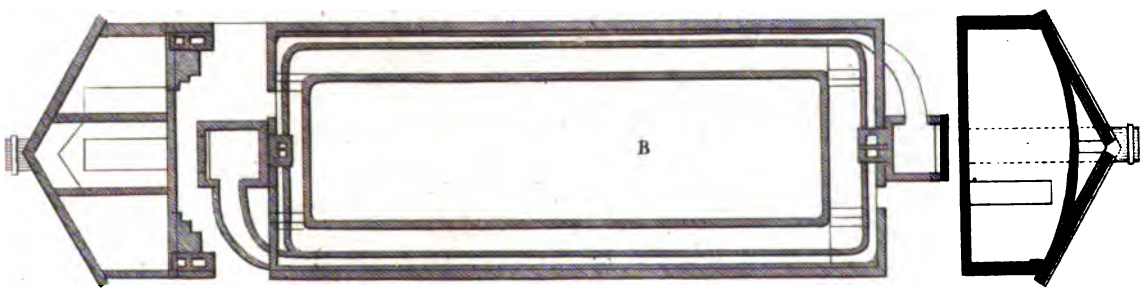


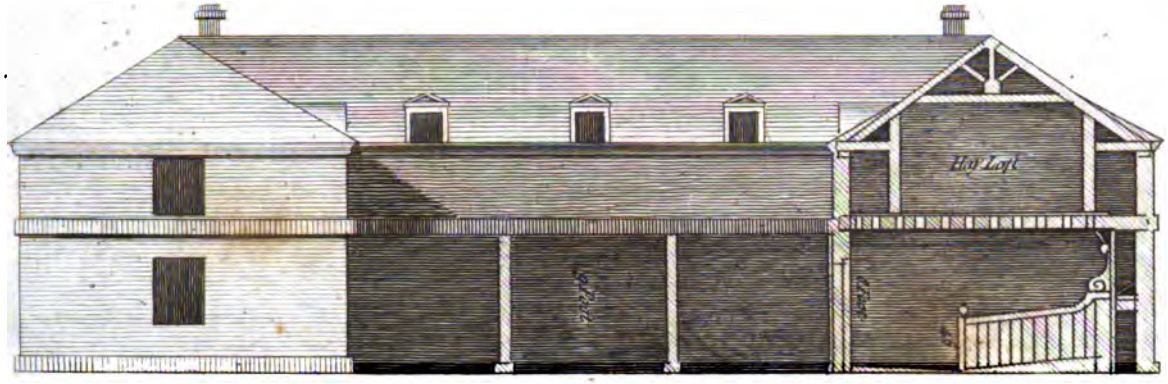
Plate LXIX.

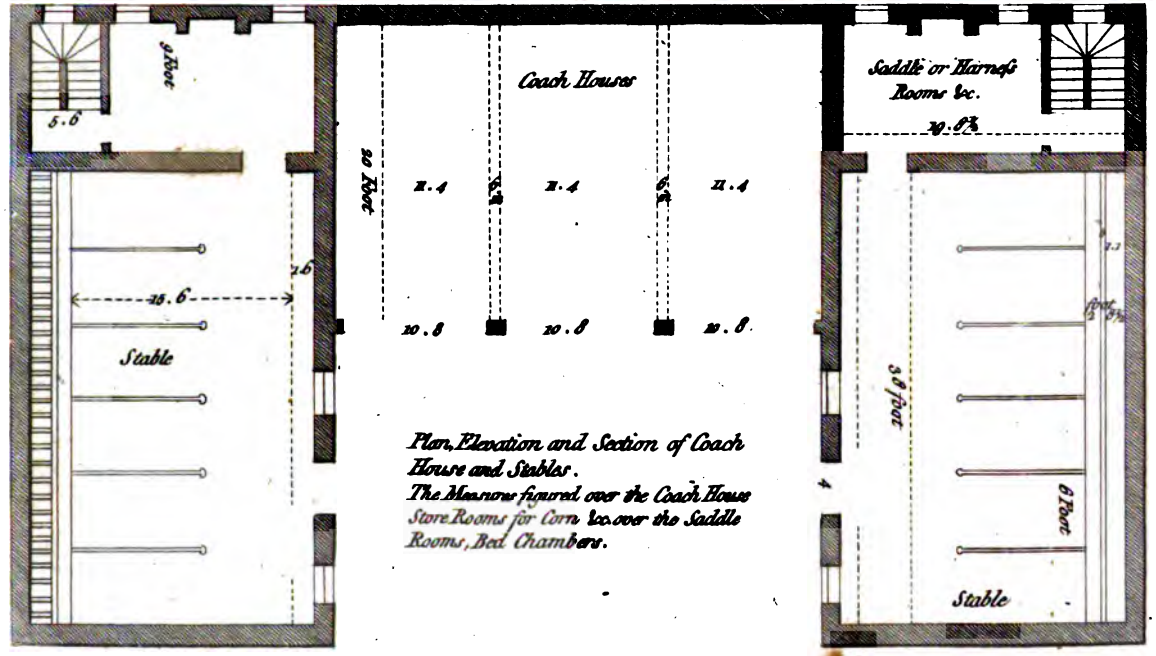




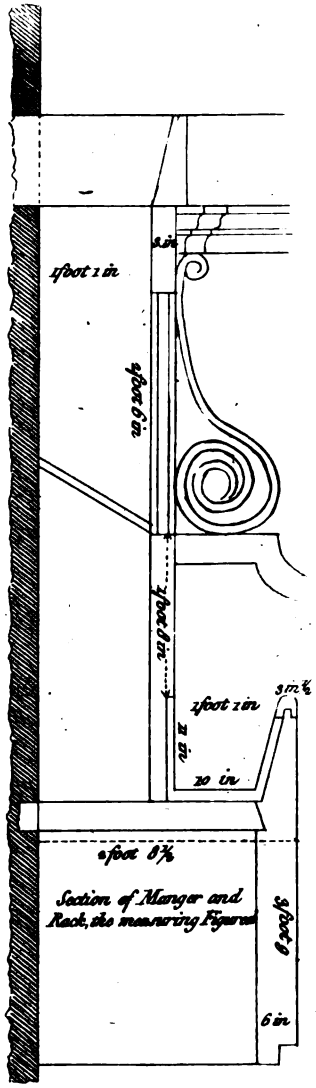
Two Plans, Elevations and Sections for Stoves or Hot Houses for Pines, Fruit Trees, Strawberrys &c.

The Plan and Section A is for Fruit Trees.
The Plan B, for Pines; the Flews in this Plan run one over another as may be seen in the Section. There are Fire Places at each End and a Walk all round.
The Flews in the Plan A. Run on the Surface and are single Flews.
The Front Roof and Ends Glass, as the Elevation of the Plan A.
The Width of each House is 16 Feet the Length at Pleasure from 40 to 50 Feet. or more at pleasure.





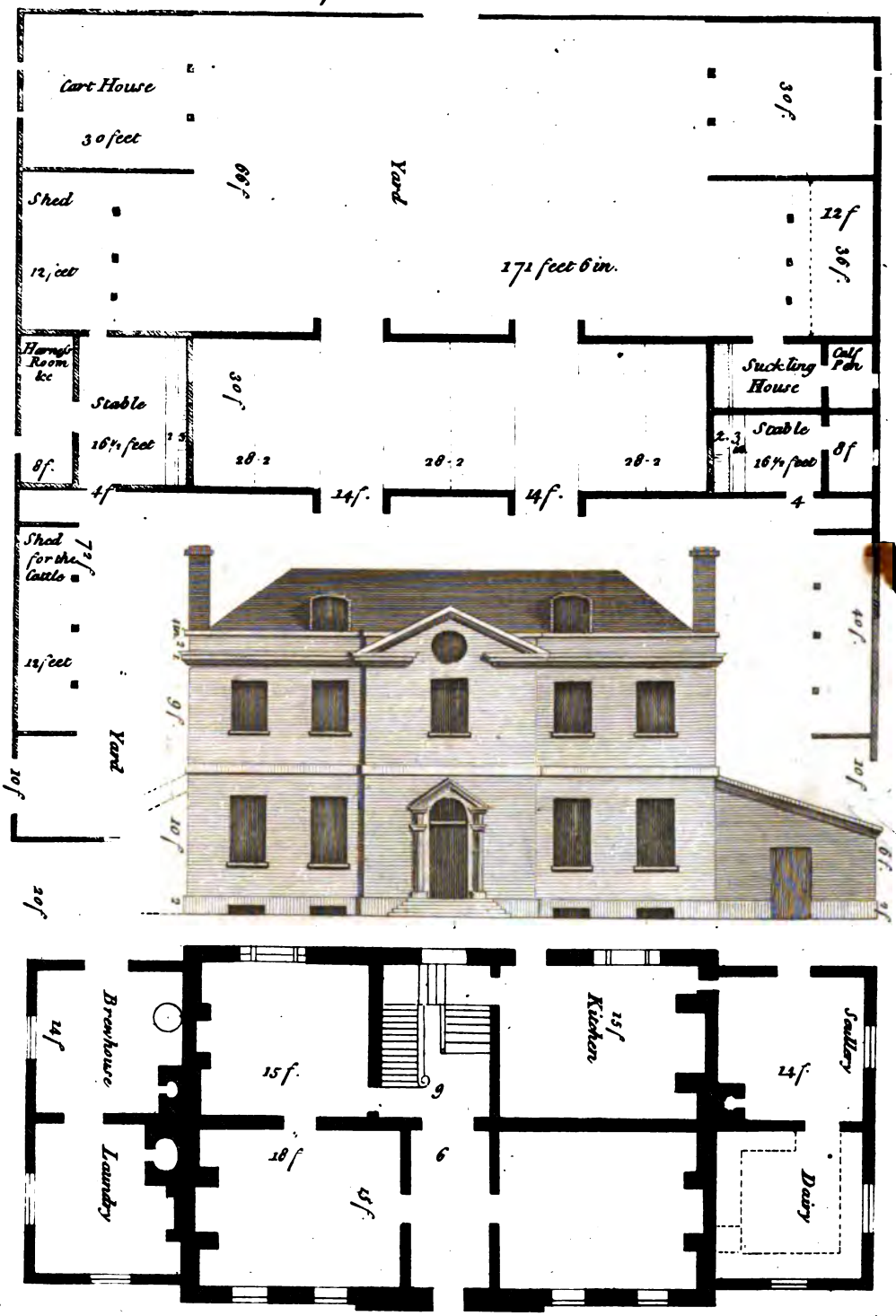
Plan, Elevation and Section of Coach House and Stables.
The Mangers figured over the Coach House Store Rooms for Corn &c. over the Saddle Rooms, Bed Chambers.



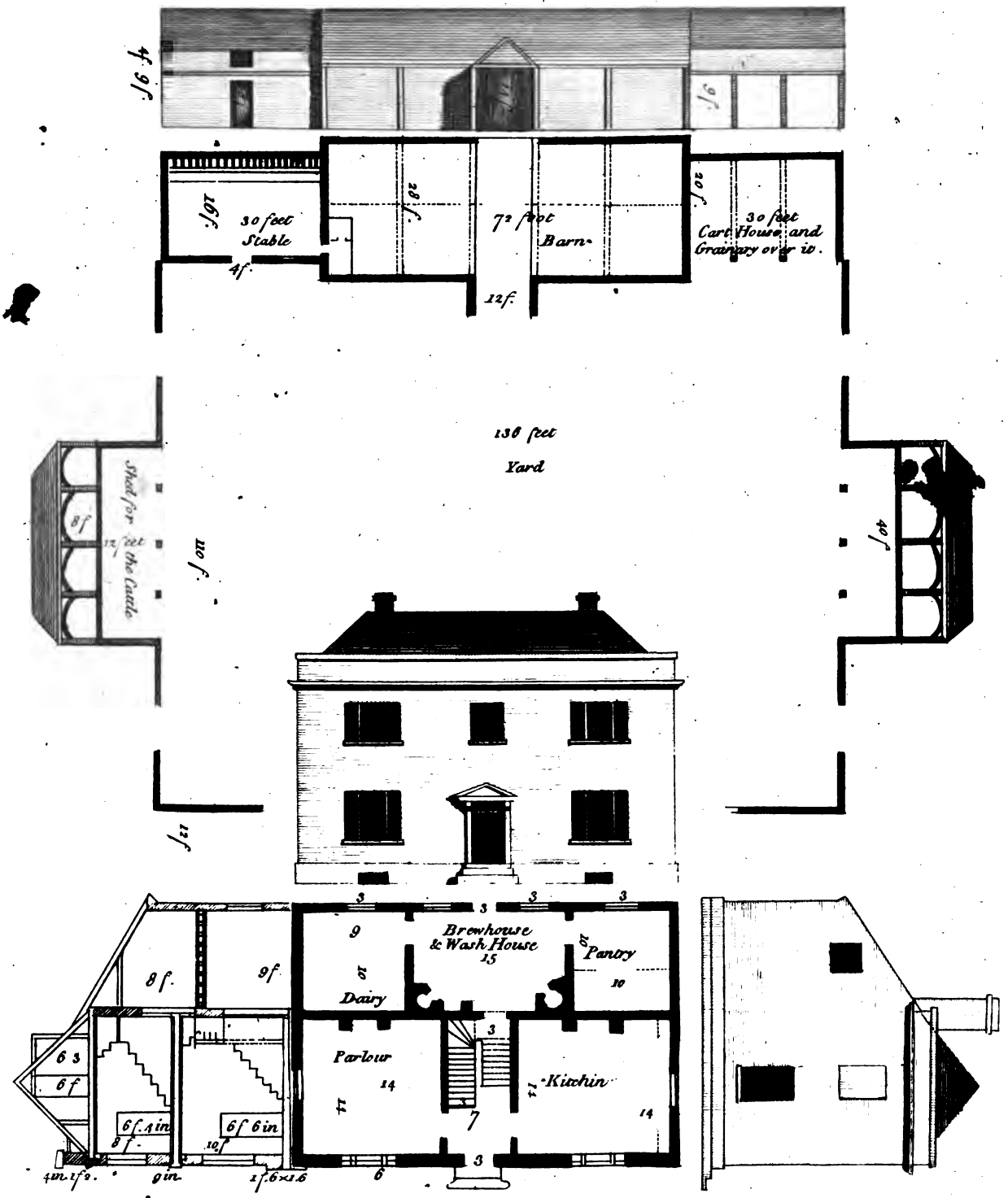
Section of Manger and Rack, the measuring Figures

Plate LXXI

Plan & Elevation of a Farm-House, Barn, Stable, &c.



Plan, Elevation & Section &c. of a Farm-house Barns, Stables &c.



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